JANUARY, 1959

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Vol. 27 No. 1

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AMATEUR RADIO

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EDITORIAL

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OUR I.T.U. REPRESENTATIVE TO GENEVA

As readers are now aware, John Moyle, VK2JU, has been selected as the representative from the Wireless Institute of Australia to accompany the Australian Government Delegation to the Administrative Radio Conference to be held in Geneva commencing on 16th August, 1959.

John Moyle needs no introduction to Australian Amateurs as he is well known to all as Editor of the Australian publication, "Radio, Television and Hobbies." In addition to his vast experience in the technical field of commercial radio he has a solid background of experience in Amateur Radio operating and W.I.A. administration extending back to 1932 when he was first licensed under the call sign of VK3JC.

He was born in Melbourne in 1908 and educated at Scotch College where he first interested himself in the technical side of Radio as editor of the school magazine. Although he spent some years as a journalist after leaving school, his natural interest in technical things directed his steps back into the world of radio and a year after obtaining his A.O.C.P. he moved to Sydney and operated under his present call sign, VK2JU.

During the years since 1933, he has given much to Amateur Radio, particularly in the v.h.f. bands where he conducted, with mobile equipment, explorations of all the now standard areas from Bowral to the Blue Mountains and Mt. Elliott in the north of New South Wales, during which time he made the then longest contact over a seventy mile route using modulated oscillators and super-regenerative receivers in the 56 Mc. and 112 Mc. bands.

After serving with the R.A.A.F. during the war as Squadron Leader in charge of Technical Administration in the Directorate of Telecommunication and Radar, he again continued interest in Amateur Radio operating individual transmitters on all bands from 3.5 Mc. to 576 Mc. For two years he maintained schedules over 150 and 200 mile paths on 144 Mc. from a difficult city location where interference was at an all time high.

Concurrently he interested himself in and devoted much of his time to the administrative affairs of the N.S.W. Division of the W.I.A. where he served on various committees, as Federal Councillor attending five or more Federal Conventions, as Vice-President of the Division, and finally two years as President.

The problem of selecting a suitable representative to send to Geneva was not an easy one, but the Federal Executive is satisfied that in John Moyle it has chosen the best man in Australia to face the problems ahead. His vast knowledge and experience in both radio and administration will ensure that the Amateurs' case is adequately presented at Geneva.

FEDERAL EXECUTIVE.

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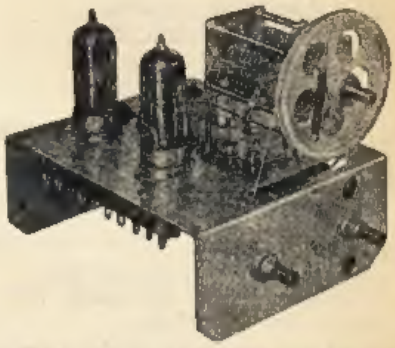

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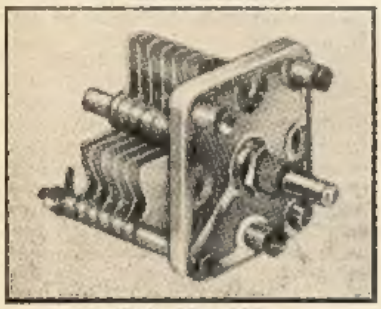

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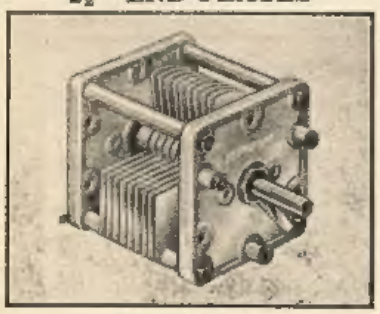

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833	Split-Stator	18	97.4	2,500 per sect.	0.080
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835	Single Section	17.6	237.3	1,250	0.040
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Putting Sense into Transmitter Hunting

BY J. C. DUNCAN,* VK3VZ

IN the "old days" of transmitter hunting it was the custom to take a bearing from the starting point, travel a few miles at right angles and take another bearing, then by triangulation, the direction of the transmitter could be determined.

If you have ever been out on one of the W.I.A. hunts you would realise that you would be a bad last if you adopted that old fashioned technique, because all the cars now make straight for the transmitter site and "home in" like pigeons, that is if pigeons flew in a straight line.

The answer is, of course, the use of Sense—and so a little theory on how it works.

Firstly, let's take the Loop Aerial. This is a large diameter coil, mounted on edge and capable of being rotated in a horizontal plane—let's see how it picks up the radio signals.

The sine wave represents the voltage of the received wave at any moment, and "A", "B" and "D" show the loop or frame at any instant in respect to the wave.

Firstly the frame can be considered as two vertical aerials joined at the top and bottom.

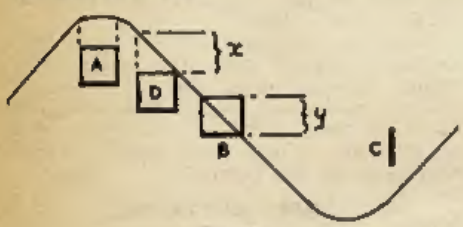


Fig. 1.

When the frame is at "A", the two voltages in the vertical sides are at maximum, but are acting in opposite directions around the loop, so their nett effect is zero.

When the frame is at "D", the induced voltages are less, but differ in amplitude by an amount proportional to the length "x", and this is the effective voltage around the frame.

Due to the fact that the voltage in the frame aerial is the algebraic difference of the voltages in the vertical limbs, and in fact is proportional to the instantaneous rate of change of the magnetic and electrical force in the wave, it is often known as the differential e.m.f.

When the frame is at "B" and the flux at the centre of the frame is zero, we see that although the voltages in the side limbs are almost at a minimum, they are acting in the same direction around the frame (one side being in the positive field and the other in the negative field), therefore the frame voltage, which is proportional to "y", is at a maximum.

Note also that if the frame is now turned side on to the incoming wave, as at "C", the voltages in each leg will be equal and opposite at all points of the wave, thereby giving zero output. This, therefore, corresponds to the null point of the loop.

The important point of all this is that as the output of the frame aerial is the algebraic difference of the voltages in the vertical limbs **the output voltage of the loop will be 90° out of phase with** the flux in the wave.

Several other facts can be deducted from the theory so far:—

(a) The frame voltage decreases as the width of the frame is reduced, and (b) The voltage in the vertical limbs is proportional to their height, so therefore the signal pick-up is proportional to the area of the frame—**so it pays to use the largest practical size.**

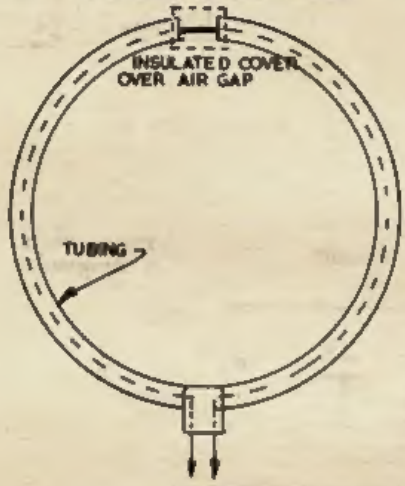


Fig. 2.

It is also obvious that if there are "N" turns in the loop, the output will be "N" times as great. So it is wise to keep the distributed capacity between turns as small as possible to allow the greatest number of turns to be used for a given loop diameter.

In most commercial installations, to avoid unbalances to ground, the loop is enclosed in an electrostatic shield, usually tubing which is open at the top, as in Fig. 2.

To obtain maximum pick-up from the loop we will need the most turns we can conveniently get, and therefore it will be necessary, as mentioned before, to keep the capacity to the shield and between turns to a minimum. A fairly large diameter tubing will help here, and in one commercial d.f. loop each turn of wire is woven through a flat insulated strip which is pushed into the tubing of the loop. Jumper wires then connect each turn to the next one.

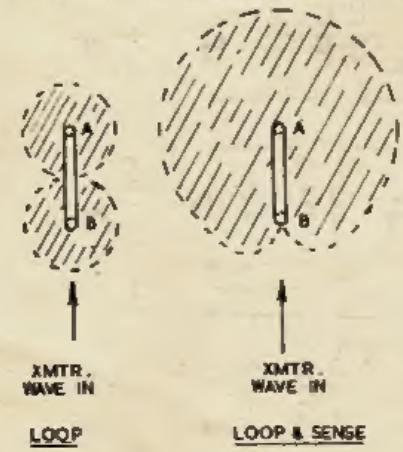


Fig. 3.

When on a hunt, with the loop turned side on to the transmitter, we have the null or zero point quite clearly defined, but this only enables us to determine the line on which the incoming signal is being received, so if the bearing is north-south, which way do you go? It is here that we need Sense determination.

In **Fig. 3 (a)** we are looking down on the loop which is end on to the received signal and giving maximum output. The vertical limbs "A" and "B" are 180° out of phase with each other, as we have seen.

Now, say we introduce a voltage from a vertical aerial so that it is in phase with "A", we will **then get a** directional pattern as shown in **Fig. 3 (b)**, with the voltage of the vertical aerial adding to the limb of the frame "A" and, if it is of **equal voltage and opposite phase**, cancelling the voltage at "B".

The technique is therefore to first pick up the transmitted signal with the loop only, and determine the line through the receiving point by the loop null. Then turn the loop end on, and listening to the signal carefully, switch on the sense aerial and note if the signal rises or decreases. Revolve the loop through 180° and again switch on the sense. If the signal had shown an increase in level before, it will now show a drop as the vertical sense aerial cancells the appropriate side of the loop. A pointer on the rotating mast will now show the way.

DESIGN OF A SENSE SYSTEM

Now, how can we design a sense system for our loop? Let's look at the important points of the loop first.

We know the loop voltage is 90° out of phase with the incoming wave regardless of whether the loop is tuned or not, but it is the currents which can be changed in phase by altering the reactance of the circuit.

If the loop is tuned the inductive and capacitive reactances cancel and the current will be in phase with the voltage, that is lagging the received wave by 90°. If, on the other hand, the loop is untuned, the circuit will be inductive and the current will lag the voltage by very nearly a further 90°, so we can see that the tuning of the loop is very critical.

The sense aerial voltage is in phase with the received voltage, but to keep the current in phase with the voltage, a resistance is usually inserted in series with the aerial to swamp any reactance which would upset this desirable state of affairs.

* 8 Columba Street, North Balwyn, Vic.

In Table 1 is shown a list of the usual circuits and the phase shifts involved, which will enable any Amateur to design his own sense system.

Now let's take an example. Fig. 4 shows a typical aircraft d.f. circuit. L1 and L3 resonate above the signal frequency (equivalent to No. 4 of Table 1). Therefore the phase shift is:

Radiation field to loop 90°
L3 and L1 to L2 .. .... 90°

= 180° or 0°

depending on which way the loop is turned.

C6, C2, L5 and L4 resonate at the signal frequency, as do L2 and C1 (equivalent to No. 3 in Table 1).

Therefore the phase shift is 0° and the sense aerial will be in phase with either one or other of the vertical limbs of the loop.

The resistor R is to vary the input from the sense antenna, and is adjusted to give complete cancellation of signal when the loop is in the position shown in Fig. 3 (b).

As the ear finds difficulty in judging signal levels over any period of time, it is desirable for the sense aerial to be connected for only a few seconds at a time. A simple arrangement is a low capacity toggle switch or push-button in series with the sense aerial where it enters the receiver.

If it is possible to get a perfect null off the back of the loop at all times, the sense can be left on, but as you can see by the field pattern in Fig. 3 (b) the nose of the pattern is broad, and if any lobe exists off the back at all a small null will appear each side of the back lobe, and can give false readings. Also, with the car in different positions with respect to the incoming signal, pick-up of the loop and sense aerial can vary slightly, so complete cancellation of the rear loop will not always apply.

If an "S" meter is used the sense can be left on, and an accurate reading obtained on the broad nose of the field pattern, but it is not satisfactory by ear. The only difficulty here is that with a keyed c.w. signal readings can only be taken during the key-down period.

Our technique has been to use the loop only for locating the line on which the transmitter is located and then to switch on the sense to determine in which direction to go.

The sense aerial is not used then until we get very close, and only if we are doubtful which side road to take, right or left.

Before leaving the car we again take a null bearing with the loop; then, taking up our loops and crystal diode meters, we walk along the null line until we get an indication. From then on experience, deduction, and good eyes and ears do the rest.

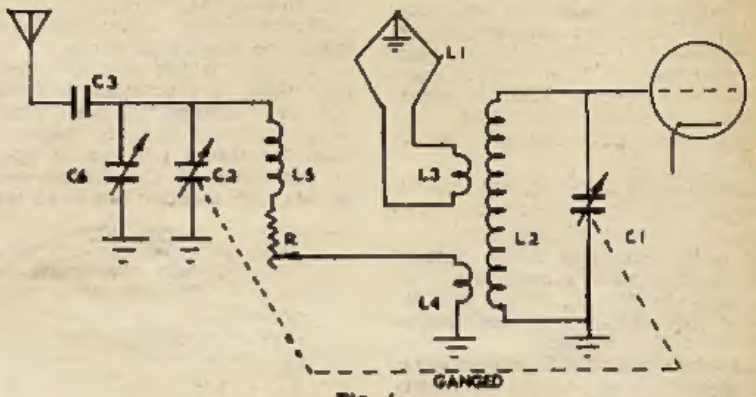


Fig. 4.

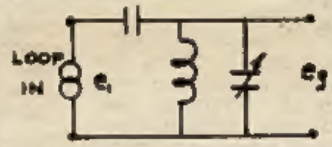
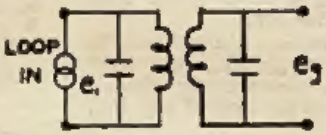
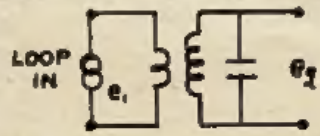
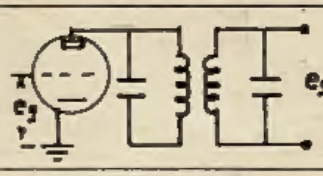
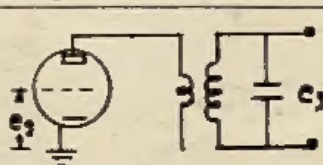
Type	Circuit	Phase Shift at Resonance
1. Series resonant circuit.		90°
2. Capacity coupled single resonant circuit, from a low impedance source.		90°
3. Two coupled resonant circuits (primary and secondary resonant at the same frequency) with reactive input coupling.		0°
4. Coupled resonant circuit having low freuency or high frequency primary with reactive input coupling.		90°
5. Two coupled resonant circuits from high plate resistance amplifier. (The primary and secondary resonant at the same frequency.)		90°
6. Coupled resonant circuit having low frequency or high frequency primary from a high plate resistance amplifier.		0°

Table 1.

SENSE AMPLIFIER

The receiver in use in the car is a "Command", covering the range 3.2 to 7.5 Mc. inc. The antenna coil was modified by breaking the earth end of the inductance and connecting it to a co-ax connector on the front panel by means of a short piece of co-ax. A six-turn primary winding was also added to the lower end of the coil, and as this primary is subject to the full h.t. voltage, it was well insulated.

Fig. 5 shows the circuit of the sense amplifier and the modifications to the r.f. stage of the "Command" receiver.

A small chassis was made up and fitted in the space normally occupied by the genemotor, and on this the r.f. sense amplifier was mounted. This is entirely conventional with the aerial input coil pre-tuned to 80 metres. The plate of the r.f. amplifier was connected to the new primary winding by a length of co-ax to prevent interaction with the other wiring in the "Command" receiver.

The sense antenna was the normal b.c. receiver antenna, and was connected to a second co-ax connector on the front panel. A low capacity toggle switch was mounted close to this connector and the lead taken through the switch and thence via co-ax to the primary of the new sense amplifier aerial coil.

Gain of the sense amplifier is controlled by a potentiometer in the cath-

ode circuit and is tuned to give cancellation on sense operation, when the loop and received signal bear the relationship shown in Fig. 3 (b).

To maintain electrical balance in the loop, the loop was tuned by a split-stator condenser with the stator earthed, and pick-up to the co-ax lead to the receiver was via a one-turn coil closely coupled to the tuned loop.

Now, how does our sensing check out?

Sense Antenna Side:

(a) Sense antenna to sense amp. grid (No. 4, Table 1)	90°	90° total
(b) Sense amp. plate untuned primary to "Command" receiver aerial circuit (No. 6, Table 1)	0°	

Loop Side:

(a) Magnetic field to tuned loop	90°	90° total
(b) Bottom few turns of grid coil inductance of r.f. stage directly coupled to loop through co-ax line (No.3, Table1)	0°	

ALTERNATIVE SENSE SET-UP

The vertical effect in a loop aerial can cause poor nulls and is usually eliminated by grounding the electrical centre of the loop. If a resistance is placed in this ground lead the voltage due to vertical effect will be developed across it.

An interesting circuit which uses this effect as a sense antenna is shown in Fig. 6 (a) and (b). In this circuit a perfect cardoid can be obtained. The behaviour is easier to see if the circuit is re-drawn as at Fig. 6 (b). The vertical effect is used to give sense.

FF = two halves of frame.

Two degrees of freedom exist.

Frame effect is due to the e.m.f. induced round the frame, the complete frame circuit now consisting of the active section FF and also coils L1 L2 which are parallel with the frame across C1.

Acting as an open aerial the complete system is tuned by C2 and with this arrangement the phase of the vertical current can be made to balance the frame current, and the relative amplitudes varied as before with resistance R.

Obviously the data presented is only in very brief form, and it is suggested that those interested should study good reference text books on the subject. Amongst those recommended are:

"Wireless Direction Finding," by Keen.

"Radio Direction Finders," by Bond.

ERRATUM

An Automatic Morse Keyer, Dec. '58. On page 7, third column, between the seventh and eighth lines of paragraph under Fig. 2, insert: "response. In the rest state, the larger".

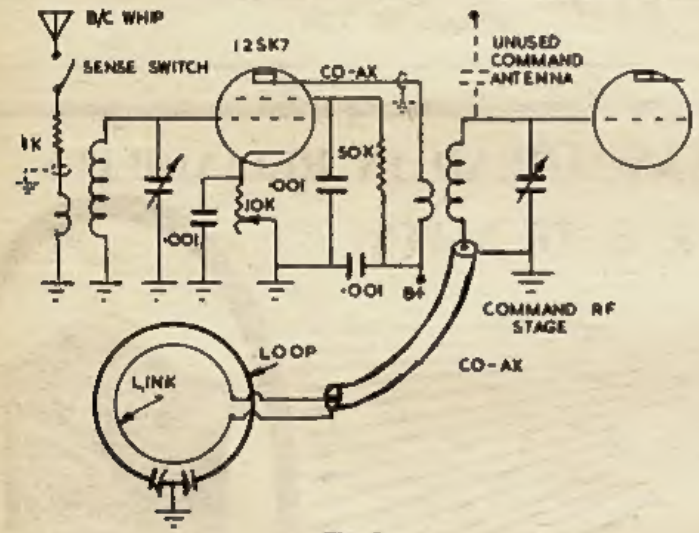


Fig. 5.

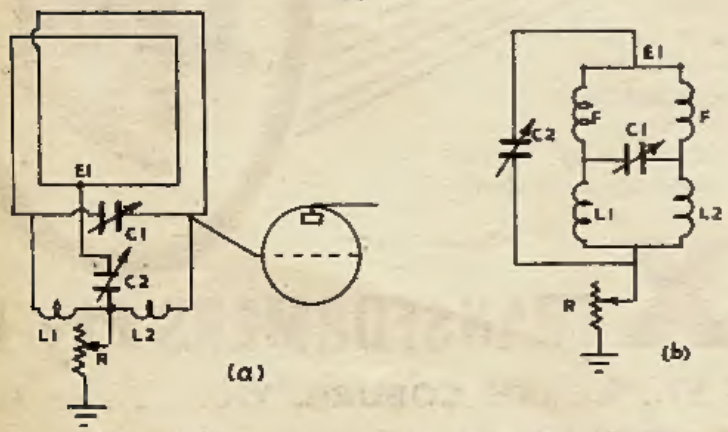
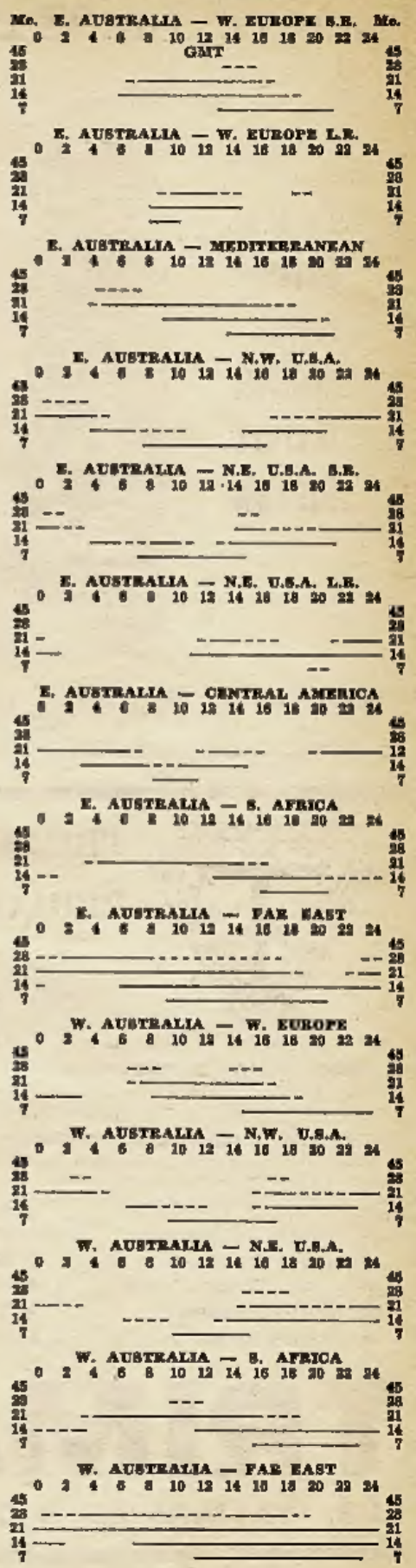


Fig. 6. (Fig. 6b is the same circuit as (a) but drawn in a different way.)

PREDICTION CHART, JAN. '59



QUARTZ CRYSTAL FILTERS

Including Part Six of Modifying the AR7 Receiver

SECTION TWO

BY G. M. BOWEN,* VK5XU

ALIGNING CRYSTAL FILTER

With the foregoing in mind, it should be possible to appreciate the steps set out in the succeeding paragraphs for aligning any crystal filter and i.f. channel. Before starting, make sure **that the crystal is there**. In the AR7 it is in a holder beneath a cover plate on the right hand side of the chassis. [3]Remove the holder and check activity of the crystal by putting it (a) into a Pierce oscillator, (b) across the grid-ground circuit of the i.f. stage of a receiver, (c) into oscillator vacuum tube circuits shown in laboratory handbooks.

Having made certain that the crystal is there, switch it in and note whether any retuning of the broadcast station you are tuned to is required for maximum output. If it is so necessary, then proceed as under.

Alignment Procedure I.

(Assuming that the i.f. is correct.—see "A.R.") The method used will depend largely on what instruments are available and the first procedure is the simplest. A stable signal generator or frequency meter (BC221 or similar) is essential. No modulation of the signal is required since the receiver will have an "S" meter.

For the AR7

Switch in the crystal, set the selectivity control on 10 and the phasing control to centre scale.

Adjust the attenuator of the signal generator to a convenient level and swing the generator frequency slowly over 455 Kc., noting the peak on the "S" meter.

If one sharp peak only is observed, the i.f. alignment is correct; should, however, two peaks appear, this will show incorrect alignment or inaccurate setting of the generator. Its frequency should be set on the centre of the peak which appears the sharper—this should be 455 Kc., the crystal frequency.

Check the accuracy of the i.f. alignment by re-adjusting the iron slugs (leaving the grid circuit in T2 and T4 alone) for maximum peak on the "S" meter with minimum input from the generator.

If modulation is available, adjust T4 grid circuit for maximum peak audio output.

After carefully checking these circuits several times, only one sharp peak should appear on the "S" meter and the sensitivity of these circuits from the grid of the converter tube should be of the order of 10 microvolts.

With the crystal IN, the signal to noise ratio should be improved and again further improved as the selectivity is increased after aligning T2 crystal filter grid circuit. This is done as follows:

1. **If no stable oscillator is available:** Insert coil unit "B" and tune in a b.c. station. Switch in the crystal and set selectivity control on O. Phasing control on centre. Adjust T2 for the best tonal qualities of the music (lack of high frequencies, and harshness is a guide) **taking no account of the loudness** of the music, etc. When the receiver dial is rotated slowly over the station the effect noticed should be the same as with the crystal out except for additional sharpness and loss of high frequencies.

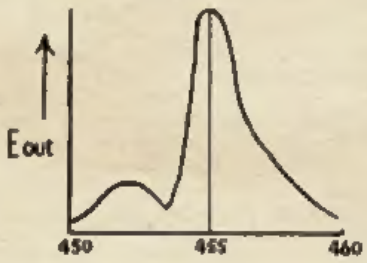


Fig. 11a.

On either side of the correct position when T2 is correctly aligned the tone will be low and drummy as the dial is rotated over the station and a distinct hollowness due to the crystal filter cutting the sideband, will appear on either side of the station.

Adjustment of T2 is made whilst rocking the dial until any assymmetry in the received signal disappears.

2. **If a stable oscillator—unmodulated—is available:** Place the generator exactly on 455 Kc. (crystal frequency) and connect output to the converter grid circuit in the usual way, or if using a BC221 a wire laid on the bench will give enough pick up.

Adjust T2 for maximum signal in the "S" meter.

Place oscillator on 450 Kc. and note "S" meter value.

Place oscillator on 460 Kc. and note "S" meter reading, which should equal that for 450 Kc.

Adjust T2 until symmetry is reached.

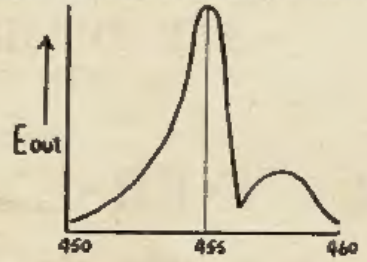


Fig. 11b.

B.f.o. Adjustment should be undertaken at the same time. Switch crystal in and with generator on 455 Kc. adjust the slug so that with the b.f.o. control on centre, zero beat is obtained. The slug can be reached through a hole in the b.f.o. shield under the chassis.

To check whether the phasing control is operating and the "notching" is occurring, place the signal generator on 453 Kc. approx., leaving the receiver as before and rotate the control anticlockwise then clockwise; there should be a distinct "plop" as the "notch" drops the signal out.

Alternatively, set the phasing control first on one side of centre and swing the oscillator from low to high side of 455 Kc. A sudden reduction in the signal will occur at frequencies above and below for the appropriate setting of the control (Figs. 11a, 11b).

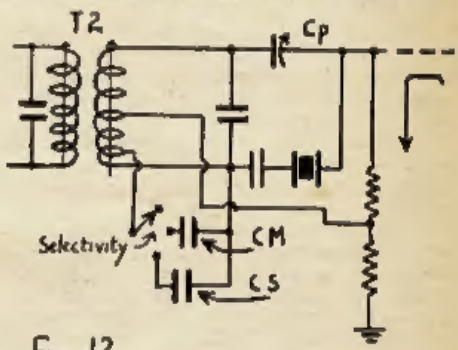


Fig. 12.

For the SX28

The SX28 circuit corresponds to Fig. 12 and the filter as already indicated lies between the first and second i.f. tubes. Basically the bridge circuit remains the same, but the selectivity variation is achieved in three steps by detuning the secondary of the input transformer T2 with trimmer type ceramic capacitors, Cm and Cs.

Set up the signal generator or oscillator on crystal frequency as for the AR7 with selectivity in "broad" and "phasing" at zero. (The i.f. stages are already aligned.)

Vary the frequency of the signal generator over a small range (± 5 Kc.) and adjust the **top screw** of T2 until the output (shown by "S" meter) goes through a maximum, dips down, and starts going up again.

Adjust the phasing control for maximum selectivity and then back off the top screw on T2 until the output reaches a **minimum** value between the two maxima first noted.

Switch on the b.f.o., which would have previously been aligned to 455 Kc., and a "swishing" note, in contrast to the usual sharp crystal tone, will be apparent when the correct adjustment has been reached.

* 73 Portrush Rd., Toorak Gardens, South Aus.

3 Only proceed thuswise if it is pretty certain that some tampering may have taken place—inspect the screws on the holder for a check.

Now, switch to selectivity "sharp" and adjust C30, the trimmer nearest the front panel, for maximum output whilst varying the signal generator frequency. Two points of maximum output will be noted corresponding to two adjustments of C30. Either one of these points may be used at which to leave C30. A sharply peaked tone will result at the correct adjustment.

For "medium xtal" adjust C29 until the output is mid-way between the broad and sharp positions.

Having got this far, it will probably be necessary to align more accurately the i.f. channel. So set the signal generator to the crystal frequency, the b.f.o. to approximately 1 Kc. tone, and the selectivity to "sharp i.f." and carefully re-align the i.f. transformers for maximum output.

Now, you will have noted, that the signal generator frequency has to be "wobbled" either side of the crystal frequency in order to obtain the correct symmetry of the filter circuits. Therefore the quickest and best way to align any i.f. channel and crystal filter is to use a frequency modulated oscillator and a c.r.o. For those who have access to these, proceed with the following:

Alignment Procedure II.
(Using wobbulator and c.r.o.)

For AR7

Connect the output of the wobbulator across the converter grid circuit via a series capacitor and a 100K resistor to ground. The c.r.o. leads from the "Y" amplifier should connect to the diode plate load of the 6G8G as near as possible to the diode plate.

Switch to crystal in and note pattern on the screen whilst adjusting the phasing control and the selectivity control. Since the wobbulator deviation frequency is synchronised to the c.r.o. sweep, the pattern should remain stationary and somewhere for the phasing control should give a symmetrical selectivity pattern.

If the i.f. channel is not correctly aligned to the crystal frequency two curves will appear as in Fig. 12a.

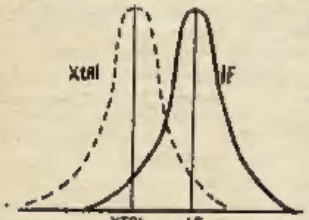


Fig 12a.

Leave the phasing control in this position. Align the i.f. transformers T1A, T2A, T2B (but do not touch L5A, the output of the filter) until the two patterns coincide. The i.f. pattern should move towards the crystal pattern.

When coincidence occurs adjust the selectivity control to maximum and the skirts of the curve should close in, still leaving the curve symmetrical. Return the selectivity control to broad position.

Now the aim is to adjust the output of the filter so that the phasing control when set at centre gives a symmetrical pattern with maximum amplitude. This will mean adjusting L5 and the phasing control step by step until the rejection notch moves from one side to the other side of the peak as the phasing condenser is moved either side of centre.

The correct adjustment of L5A and phasing control should result in a "rejection notch" which does not alter its position horizontally as the selectivity control is adjusted. The curve should just "flatten out" at the peak and the notch. (Fig. 12b.)

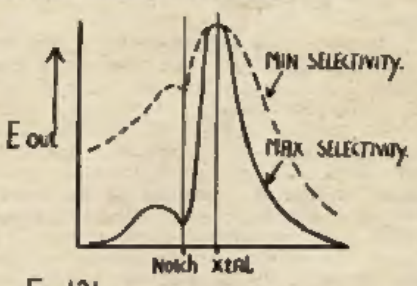


Fig 12b.

For best adjustments, use as small an output as possible from the wobbulator resulting in a good pattern trace. Adjust the deviation accordingly as the alignment proceeds to enable good visual checking. And finally, keep the sweep frequency as low as possible for a distortionless trace, e.g. 16 c.p.s. to 50 c.p.s.

Remember, Rome was not built in a day, and be prepared to spend many hours of careful, patient effort, because in the end it really makes that AR7 or SX28 (and any other receiver) a communications receiver that can eliminate unwanted signals as close as 250 c.p.s. to the wanted one.

A bibliography will be attached hereunder giving all the books and articles to which reference has been made. Also the latter part of this article could not have been written without the tuition gained from Frank Wreford (ex-VK5DW, now residing in VK6). No text book that has been available since this article was contemplated has the complete answer to the problem and it is hoped that this article has now collated much technical data for those who can make use of it.

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APPENDIX

Single Signal Operation

A good crystal filter is of no advantage unless the operator knows how to use it and one of the best tricks is known as "Single Signal Reception." This applies particularly to c.w. reception but with limitations can be used for phone.

Pick a good solid c.w. signal, preferably a commercial station because it is likely to stay on long enough for the adjustment to be completed.

Turn on the b.f.o. and adjust control to the desired beat note. Place the selectivity control on the sharpest position and phasing control on zero.

Tune across the signal and note that there are two amplitudes appearing, one strong and one weak. Leave the tuning on the weaker of these two and turn the phasing control until this weaker signal is reduced to a minimum.

Finally tune to the stronger of the two amplitudes and adjust the b.f.o. control to a good operating tone.

Having made this adjustment for single signal reception of one signal no further adjustment is required as further signals are searched for. Of course the phasing control should not be altered.

Single Sideband Generator

The same principles which have been outlined in this article apply to the removal of the carrier and the unwanted sideband. Using crystal filters in series and shunt connections, the series resonance can be used to remove the carrier and pass the sideband, whilst the antiresonance frequency, due to the capacitance of the holder of the same two crystals, can block the carrier from being passed and the sideband from being shunted.

W.I.A. Official List of Countries for DXCC

The list of Countries hereunder and as amended from time to time in Federal Awards Notes is the Official List to be used in connection with the issue of the Australian DXCC Award.

The list below shows first the Prefix, the Country, and the Zone Numbers in parenthesis (as used for "CQ" WAZ award).

AC3—Sikkim (22)
AC4—Tibet (23)
AC5—Bhutan (22)
AP2—Pakistan (21. 22)
BV (C3)—Formosa (24)
C (unofficial)—China (23, 24)
C3—See BV.
C9—Manchuria (24)
CE—Chile (12)
CE9, KC4, LU, VK0, VP6, ZL5—Antarctica (13, 29, 30)
CE0—Easter Island (12)
CM, CO—Cuba (8)
CN2—Tangier Zone (33)
CN8—French Morocco (33)
CP—Bolivia (10)
CR4—Cape Verde Ls. (35)
CR5—Port. Guinea (35)
CR5—Principe, Sao Thome (36)
CR6—Angola (36)
CR7—Mozambique (37)
CR8—Goa (Port. India) (22)
CR9—Macau (24)
CR10—Port. Timor (28)
CT1—Portugal (14)
CT2—Azores (14)
CT3—Madeira Is. (33)
CX—Uruguay (13)
DJ, DL, DM—Germany (14, 15)
DU—Phillipine Is. (27)
EA—Spain (14)
EA6—Balearic Is. (14)
EA8—Canary Is. (33)
EA9—Ifni (33)
EA9—Rio de Oro (33)
EA9—Spanish Morocco (33)
EA0—Spanish Guinea (35)
EI—Eire (14)
EL—Liberia (35)
EQ—Iran (21)
ET2—Eritrea (37)
ET3—Ethiopia (37)
F—France (14)
FA—Algeria (33)
FB8—Amsterdam & St. Paul Is. (39)
FB8—Comoro Is. (39)
FB8—Kerguelen Is. (39)
FB8—Madagascar (39)
FB8—Tromelin Is. (39)
FC (unofficial)—Corsica (15)
FD—Togo (35)
FE8—Fr. Cameroons (36)
FF8—Fr. West Afrcia (35)
FG7—Guadeloupe (8)
FK8—New Caledonia (32)
FL8—Fr. Somaliland (37)
FM7—Martinique (8)
FO8—Clipperton Is. (7)
FO8—Fr. Oceania (32)
FP8—St. Pierre & Miquelon Is. (5)
FQ8—Fr. Equat. Africa (36)
FR7—Reunion Is. (39)
FS7—Saint Martin Is. (8)
FU8, YJ—New Hebrides Is. (32)
FW8—Wallis & Futuna Is. (32)
FY7—Fr. Guiana & Inini (9)
G—England (14)
GC—Channel Is. (14)
GD—Isle of Man (14)
GI—Northern Ireland (14)
GM—Scotland (14)
GW—Wales (14)
HA—Hungary (15)
HB—Switzerland (14)
HC—Ecuador (10)
HC8—Galapagos Is. (10)
HE—Liechtenstein (14)
HH—Haiti (8)
HI—Dominican Republic (8)
HK—Colombia (9)
HK0—San Andres & Providencia (9)
HL—Korea (25)
HP—Panama (7)
HR—Honduras (7)
HS—Thailand (26)
HV—Vatican City (15)
HZ—Saudi Arabia (21)
I1, IT1—Italy (15)
I5—Italian Somaliland (37)
IS1—Sardinia (15)
JA, KA—Japan (25)
JT1—Mongolia (23)
JY—Jordan (20)
JZ0—Neth. New Guinea (28)
K, W—United States of America (3, 4, 5)
KA—See JA.
KA0, KG6I—Bonin and Volcano Is. (27)
KB6—Baker, Howland & Amer. Phoenix Is. (31)
KC4—See CE9.
KC4—Navassa Is. (8)
KC6—East Caroline Is. (27)
KC6—West Caroline Is. (27)
KG1—See OX.
KG4—Guantanamo Bay (8)
KG6—Mariana Is. (27)
KG6I—See KA0.
KH6—Hawaiian Is. (31)
KJ6—Johnson Is. (31)
KL7—Alaska (1)
KM6—Midway Is. (31)
KP4—Puerto Rico (8)
KP6—Palmyra Group & Jarvis Is. (31)
KR6—Ryukyu Is. (25)
KS4—Swan Is. (7)
KS6—American Samoa (32)
KV4—Virgin Is. (8)
KW6—Wake Is. (31)
KX6—Marshall Is. (31)
KZ5—Canal Zone (7)
LA—Jan Mayen (40)
LA—Norway (14)
LA—Svalbard (40)
LU—Argentina (13)
LU-Z—See CE9, VP8.
LX—Luxembourg (14)
LZ—Bulgaria (20)
M1—San Marino (15)
MP4—Bahrein Is. (21)
MP4—Qatar (21)
MP4—Trucial Oman (21)
OA—Peru (10)
OD5—Lebanon (20)
OE—Austria (15)
OH—Finland (15)
OK—Czechoslovakia (15)
ON4—Belgium (14)
OQ5, 0—Belgian Congo (36)
OX, KG1—Greeland (40)
OY—Faroes (14)
OZ—Denmark (14)
PA0, PI1—Netherlands (14)
PJ2—Neth. West Indies (9)
PJ2M—Sint Maarten Is. (9)
PK1, 2, 3—Java (28)
PK4—Sumatra (28)
PK5—Borneo (28)
PK6—Celebes & Moluccas Is. (28)
PX—Andorra (14)
PY—Brazil (11)
PZ1—Neth. Guiana (9)
SL, SM—Sweden (14)
SP—Poland (15)
ST2—Sudan (34)
SU—Egypt (34)
SV—Crete (20)
SV—Greece (20)
SV—Dodecanese Is. (20)
TA—Turkey (20)
TF—Iceland (40)
TG—Guatemala (7)
TI—Costa Rica (7)
TI9—Cocos Is. (7)
UA1, 2, 3, 4, 6—European R.S.F.S.R. (15, 16, 17)
UA1—Franz Josef Land (40)
UA9, 0—Asiatic R.S.F.S.R. (17, 18, 19, 25)
UA0—Wrangel Is. (19)
UB5—Ukraine (16)
UC2—White Russian S.S.R. (16)
UD6—Azerbaijan (21)
UF6—Georgia (21)
UG6—Armenia (21)
UH8—Turkoman (17)
UI8—Uzbek (17)
UJ8—Tadzhik (17)
UL7—Kazakh (17)
UM8—Kirghiz (17)
UN1—Karelo-Finnish (16)
UO5—Moldavia (16)
UP2—Lithuania (15)
UQ2—Latvia (15)
UR2—Estonia (15)
VE, VO—Canada (2, 3, 4, 5)
VK—Australia (29, 30)
VK0—See CE9.
VK0—Heard Is. (39)
VK0—Macquarie Is. (30)
VK9—Cocos Is. (29)
VK9—Nauru Is. (28)
VK9—Norfolk Is. (32)
VK9—Papua Terr. (28)
VK9—Ter. of New Guin. (28)
VO—See VE.
VP1—Brit. Honduras (7)
VP2—Leeward Is. (8)
VP2—Windward Is. (8, 9)
VP3—Brit. Guiana (9)
VP4—Trinidad & Tobago (9)
VP5—Cayman Is. (8)
VP5—Jamaica (8)
VP5—Turks & Caicos Is. (8)
VP6—Barbados (8)
VP7—Bahamas Is. (8)
VP8—See CE9
VP8—Falkland Is. (13)
VP8—South Georgia Is. (13)
VP8—South Orkney Is. (13)
VP8—Sth. Sandwich Is. (13)
VP8—Sth. Shetland Is. (13)
VP9—Bermuda Is. (5)
VQ1—Zanzibar Is. (37)
VQ2—Nth. Rhodesia (36)
VQ3—Tanganyika Ter. (37)
VQ4—Kenya (37)
VQ5—Uganda (37)
VQ6—Br. Somaliland (37)
VQ8—Chagos Is. (39)
VQ8—Mauritius (39)
VQ9—Seychelles Is. (39)
VR1 Brit. Phoenix Is. (31)
VR1—Gilbert, Ellis & Ocean Is (31)
VR2—Fiji Is. (32)
VR3—Fanning & Christmas Is. (31)
VR4—Solomon Is. (28)
VR5—Tonga Is. (32)
VR6—Pitcairn Is. (32)
VS1—Singapore (28)
VS2—Malaya (28)
VS4—Sarawak (28)
VS5—Brunei (28)
VS6—Hong Kong (24)
VS9—Aden & Socotra (21)
VS9—Maldive Is. (22)
VS9—Sultanate of Oman (21)
VU2—India (22)
VU4—Laccadive Is. (22)
VU5—Andaman & Nicobar Is. (26)
W—See K.
XE, XF—Mexico (6)
XV—Viet Nam (26)
XW8—Laos (26)
XZ2—Burma (26)
YA—Afghanistan (21)
YI—Iraq (21)
YJ—See FU8.
YK—Syria (20)
YN—Nicaragua (7)
YO—Roumania (20)
YS—Salvador (7)
YU—Yugoslavia (15)
YV—Venezuela (9)
ZA—Albania (15)
ZB1—Malta (15)
ZB2—Gibraltar (14)
ZC3—Christmas Is. (29)
ZC4—Cyprus (20)
ZC5—Br. North Borneo (28)
ZC8—Palestine (20)
ZD1—Sierra Leone (35)
ZD2—Nigeria (35, 36)
ZD3—Gambia (35)
ZD6—Nyasaland (37)
ZD7—St. Helena (36)
ZD8—Ascension Is. (36)
ZD9—Tristan da Cunha & Gough Is. (38)
ZE—Rhodesia South (36)
ZK1—Cook Is. (32)
ZK2—Niue (32)
ZL—Kermadec Is. (32)
ZL—New Zealand (32)
ZL5—See CE9.
ZM6—British Samoa (32)
ZM7—Tokelau (Union) Is. (31)
ZP—Paraguay (11)
ZS1, 2, 4, 5, 6—Union of South Africa (38)
ZS2—Prince Edward & Marion Is. (38)
ZS3—Sth. West Africa (38)
ZS7—Swaziland (38)
ZS8—Basutoland (38)
ZS9—Bechuanaland (38)
3A—Monaco (14)
3V8—Tunisia (33)
3W8—Cambodia (26)
4S7—Ceylon (22)
4W1—Yemen (21)
4X4—Israel (20)
5A—Libya (34)
9G—Ghana (35)
9K—Wukait (21)
Aldabra Is. (39)
Nepal (22)

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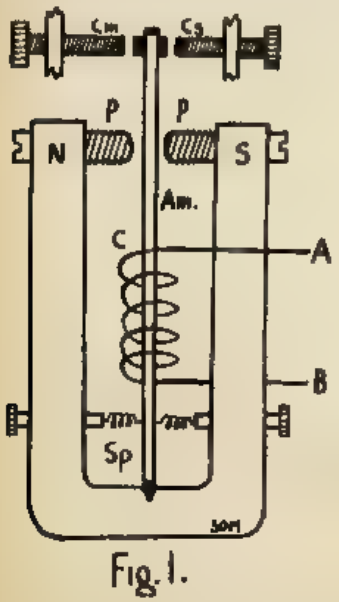
Polarised Relays, Their Use in an Automatic Keyer

BY D. G. HAWTHORNE,* VK3ZCD

POLARISED relays are uncommon in Amateur apparatus, being comparatively expensive,, and as they are not described in radio text books, surrounded by veil of mystery. This causes them to be dismissed as a specialised component, having no general use in Amateur equipment. It is hoped that this article will show that polarised relays are, in fact, simple devices of great versatility, having several advantages over the solenoid type relay.

Most readers have experienced the attractive force of a horse-shoe magnet on a nail or similar ferromagnetic material; however, if the nail was placed symmetrically between the poles, the net attractive force is very small, but, if it was moved nearer one pole, it was quickly drawn towards the magnet. It is also well known that unlike magnetic poles attract each other, whereas like poles repel, and that a current flowing in a coil produces a magnetic field passing axially through the coil, and having direction such that a clockwise current flow causes the "north-pole" to face the viewer. These three facts are the basis for the operation of polarised relays.

A simplified diagram of a polarised relay is given in Fig. 1. A permalloy armature, Am, is placed symmetrically between the poles of a horse-shoe magnet, being held in the central position by a spring suspension system, Sp. This spring resists any tendency for the armature to be drawn towards the magnet. Adjustable pole-pieces, P, enable the magnetic bias to be altered to suit the particular requirements. A fixed coil, C, is wound around the armature, which is free to move in an air gap in the centre of the coil. Movement of the armature can close the contacts Cm and Cs.



* Flat 3, 11 Leopold St., South Yarra, Vic.

● In an article titled "An Automatic Morse Keyer," "A.R." Dec. 1958, the author stated reasons for use of a thermionic keying circuit instead of a simple relay circuit. "Ham" Radio Suppliers has recently obtained supplies of polarised relays. The low cost prompted the author to buy a couple to experiment with the possibility of their use in the keyer. These experiments have been entirely successful, as was to be expected, polarised relays being used for this purpose commercially.

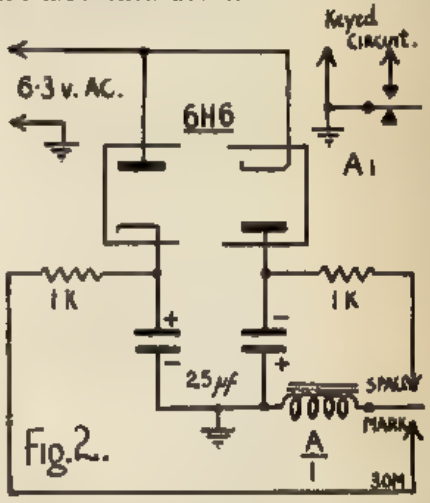
The accompanying article contains a description of the modification to the original circuit, together with a description of the operation of polarised relays.

A current flowing through the coil will cause the armature to behave like a temporary magnet, the polarity depending on the direction of current flow. Consider a current flowing from A to B; the contact end of the armature behaves like the "north-pole" of a magnet. This will result in a net attractive force towards the "south-pole" of the horse-shoe magnet. If the current is large enough, this attractive force will overcome the restraint of the armature spring, and the contacts Cs will be closed.

On interruption of the current, the low retentivity of permalloy causes the residual magnetism in the armature to decay rapidly, the spring then returning the armature to the central position. It will be seen that a current flowing from B to A will cause the armature to move towards the contacts Cm. Thus polarised relays can distinguish positive and negative current flow.

Polarised relays are inherently more sensitive to small currents than the normal solenoid type. The attractive force on the armature of a polarised relay is directly proportional to the current magnitude, whereas the force on a solenoid relay armature is proportional to the square of the current magnitude. The standard 3000-type relay, well known in disposals equipment, requires 120 ampere-turns to operate a single set of change-over contacts; this is equivalent to a power requirement of approximately 60 milliwatts. A typical polarised relay requires only 2 ampere-turns to operate similar contacts; this is a power requirement of approximately 60 microwatts. The 299-type relay requires a current of 80 microamps. to operate, a power requirement of less than 5 microwatts. The sensitivity can be varied by adjusting the pole-pieces. By moving both equally towards the armature, the sensitivity is increased, the limit being when the attractive force resulting from a small displacement of the armature, overcomes the restraining force of the spring. When adjusted for maximum sensitivity, the relay is very easily affected by mechanical shock and stray magnetic fields.

When the pole-pieces are closer than the position for maximum sensitivity, the spring has no control on the armature, which now behaves like the nail and magnet example mentioned earlier. However, if a current is passed through the coil in the right direction, the induced magnetism in the armature can cause the mutual repulsion of like poles to force the armature to the other pole-piece, where it remains after the current ceases, and until an opposite current can reverse the motion. The relay now behaves like a double-throw switch, with maximum sensitivity when the pole-pieces are at the critical position mentioned above.



By moving one pole-piece closer to the armature than the other, the armature can be made to rest against the contacts on the nearer side. A current of suitable polarity flowing through the coil can cause the armature to swing to the opposite contacts for the duration of the current-flow. This is analogous to the normal change-over relay operation.

The relays used by the writer are of American manufacture. They have two coils, one of 2,500 ohms used for the signal, and one of 200 ohms used for biasing for use in repeater circuits. The operating current minimum is between 200 and 100 microamps., depending on the care in adjustment, and the mechanical stability of the particular relay. 500 microamps. sensitivity is easily obtained, and the relay is now not affected by stray influences. The relay is enclosed in a case of ferrous alloy to lessen influence of stray fields; the adjusting screws, reached by a lid in the top of the relay case, must be altered with the relay in the case, and with non-magnetic tools (the

(Continued on Page 14)

Jointing of Aluminium & Aluminium Alloys

BY R. NEAL,* VK3ZAN

● The author of this article kindly submitted sample welds to cover this article. One sample, consisting of two pieces of ¾" diam. x 18 gauge tube, was welded at right angles We submitted this sample to test by applying a gradually increasing load. Failure occurred under a load of 210 lbs. There was virtually no plastic deformation of the tubing, indicating the strength of the weld to be far below that of the aluminium tubing. If we can take this particular sample as typical of results, it would appear advisable to take 100 lbs. as a safe working load. For beam construction it appears to meet a long felt want for ensuring good electrical joints. —Technical Editor.

WE have all been confronted some time or other with the problem of jointing aluminium or aluminium alloys, be it in tube or sheet form. Most of us have also probably tried some of the alloys on the market that are supposedly excellent for soldering aluminium. In the experience of the author, none of these solders will give a satisfactory joint, however by applying a little more heat, such as from a blow lamp or gas flame, a very satisfactory joint can be made by using diecast welding rod without the use of a flux.

If you have not used this previously, you will be surprised by the ease at which this material runs onto a clean heated aluminium surface. You will also be surprised at the strength of the joint.

The method is to first of all clean the parts to be joined with a file or sand paper. Then the parts must be "tinned"—heat them over a clean flame until when the end of the diecast welding rod is applied to the part it melts and you will notice how freely the material from the rod adheres to the parts to be joined.

While the heating of the parts to be joined is in progress, keep testing the temperature by rubbing the end of the diecast rod on the part, but do not leave the rod in the flame any longer than necessary, otherwise it will become soft and brittle and will break off when next applied to the part.

After "tinning", hold the two parts to be joined together over the flame and keep testing the temperature with the rod until the diecast flows into the joint.

It will be wise to direct the flame away from the joint while the rod is being applied, otherwise trouble will be experienced with the rod becoming too hot.

Make sure that both parts to be joined are hot enough by melting the rod onto both parts.

This method can be used for inserting sections in a chassis—a neat fillet can be made with the diecast rod, or joining elements to booms of antennae or making electrical connections. By forming a fillet between two round sections to be joined at right angles an extremely strong joint will result, in fact as strong as the base metal.

Several joints of the above nature made by the author on 7/16" diam. 18 s.w.g. tubing when tested to destruction, broke a piece out of one of the tubes rather than break at the applied metal.

Ordinary 50-50 soft solder can be applied over the diecast metal in the normal manner, thus joints between copper and aluminium can be made satisfactorily by first applying the diecast to the aluminium and then using normal soldering processes, however if two dissimilar metals such as these are joined care must be taken to prevent corrosion at the joint.

Corrosion tests in a humidity cabinet on aluminium joined with diecast metal showed only slight corrosion of the applied metal, but the aluminium was not effected. It is not considered necessary, therefore, that joints, even on antennae exposed to the weather, need be protected in service.

Diecast welding rods are available from suppliers of gas welding equipment in sizes of 3/16" diameter by 12" long at a cost of approximately 7d. per stick.

Try it; if you are not completely satisfied with the results, the author will only be too pleased to answer any queries.

* 11 Xavier Street, North Essendon, Vic.

MOUNTING BRACKET FOR MOBILE ANTENNA

With the growing interest in portable and mobile operation, and the adaption of ex-disposals equipment for this purpose, the following method of attaching a five inch diameter flexible (rubber) antenna mount to a car may be of interest to Amateurs.

The attached sketch will speak for itself. The measurements shown will fit the rear bumper bar mounting bolt of a Morris Oxford (1953 model).

First, the mount itself was obtained (from disposals sources) at a cost of 12/6.

A local engineering firm constructed the supporting bracket and fixed it on the car for the princely sum of 13/6. The material used comprised: One 6" length of ¼" mild steel, 1½" wide; one 1½" length of ¼" mild steel, 1" wide; one 5" diameter plate, ¼" thick.

First the two pieces of steel were welded as indicated, then the plate welded on top. It had been found necessary to trim the plate and the base of the antenna mount to fit it in. This meant only five mounting holes remained out of the original six, but the job is quite satisfactory. (Used ¼" metal thread screws and nuts.)

I had a hole bored in the plate to facilitate leading a co-ax cable to the bottom of the mount and a grommet fitted to protect the cable.

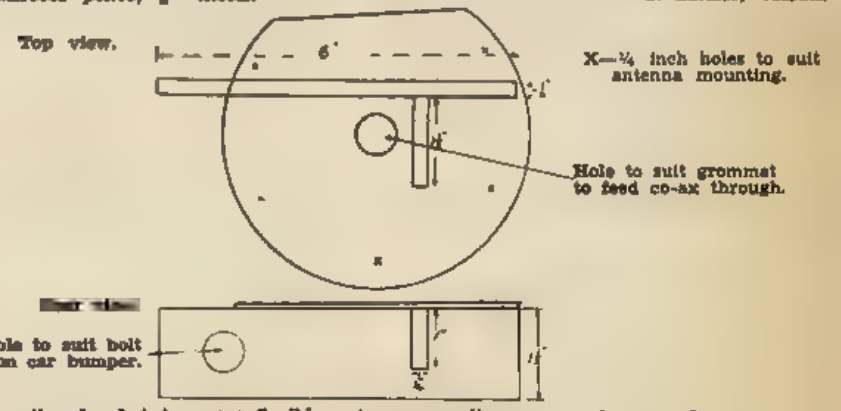
The job is quite robust and inconspicuous if the antenna is not standing.

I suggest the steel work be painted to match the car prior to mounting.

One bolt holds the bracket to the car and it is supported by the bumper mounting bracket.

No doubt this idea could be modified to suit other vehicles with little difficulty and certainly it would not be a costly job for any vehicle.

—T. Laidler, VK5TL.



Mounting bracket to carry flexible antenna mounting on rear bumper of car.

AMENDMENTS TO 1958 R.D. CONTEST RESULTS

In the Listeners' Section, G. R. Morris (VK3) was shown with a total of 189 points. This was only his 80 mx score. His correct total is 1074 points. The amended Award Winners for VK3 now read:—

VK3—G. R. Morris	1074	points
A. C. Stebbing	815	"
C. T. Taylor ..	793	"

Erratum.—Under the heading of Call Area Awards, the sub-headings of "Open" and "C.w." should be transposed.

AMATEUR TELEVISION

Amateur Television enthusiasts may be interested to know that an excellent little magazine called "CQ-TV" is published by the British Amateur Television Club. Membership to this club is 10/- (sterling) per annum, payable to the new Editor, J. E. Tanner, of 16 Norfolk Drive, Chelmsford, Essex, England.

In a letter to "Amateur Radio," John Tanner mentioned that he enjoyed following VK6EC/T's series of t.v. articles in "A.R."

MEET THE OTHER AMATEUR AND HIS STATION

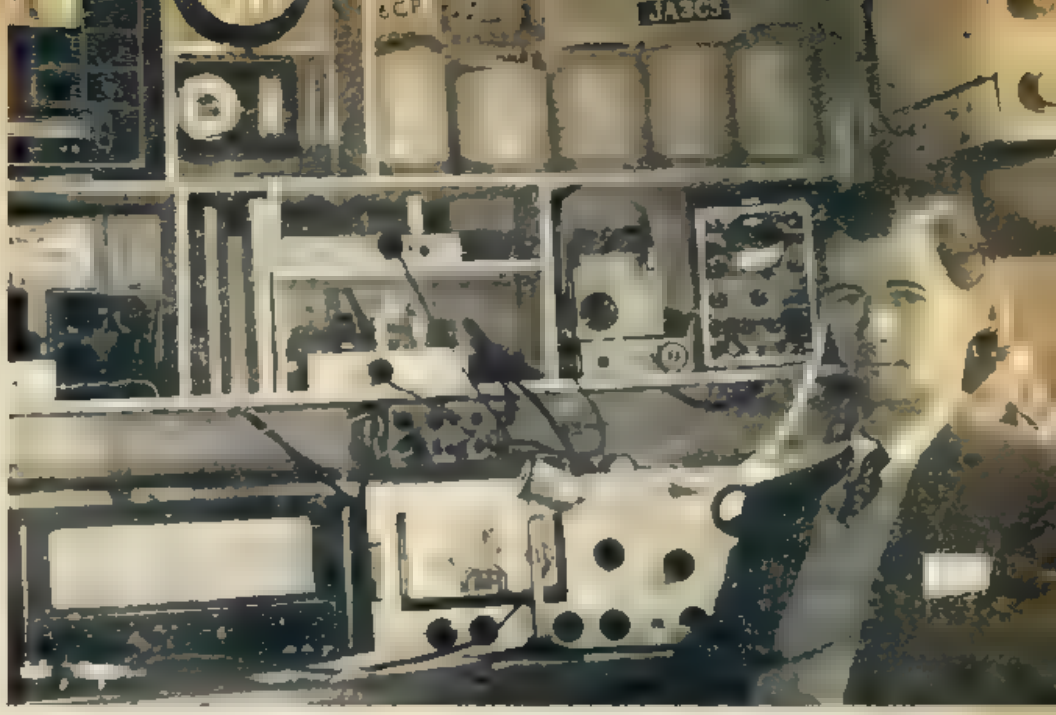
BOB ELMS*
VK6BE

BOB Elms was born in Western Australia in 1923. First interest in Radio was acquired during the war, when he served for several years in a signal unit. This was followed up after the war, but Radio as a hobby was restricted to broadcast set and audio until the A.O.C.P. was passed in January 1955

Main interest is centred on the v.h.f. bands, particularly 50 Mc. Other bands worked at 80, 40, 20, 15, 10 and 2 metres. Gear for this latter band is being re-built. DX stands at about 75 countries at present. 50 Mc. DX is VK2, 4, 5, ZL, ZS2, JA1 to 0 (about 250 QSOs with 140 different JA stations).

Seen in the photo from top left to right are valve and circuit tester, clock, barometer, thermometer, tins of parts, five-band aerial tuner (above head). Below these are power supply for converters, text books, 144 and 50 meg. converters with switching device below, preselector (VK5AX type, but using 6AG5 and 6C4), c.r.o. and tape recorder (behind head).

* 29 Central Road, Kalamunda, West. Aust.



On the bench may be seen Eddystone "750" and rig consisting of Geloso v.f.o., VT501 buffer, HK257B final running 120 watts.

In the extreme bottom left hand corner can be seen the corner of a cabinet containing EL34 class B modulator and tone oscillator. Above (out of photo) are 6 and 2 metre transmitters each running 120 watts to HK257B, and also filament and relay supplies.

All high voltage supplies are built into the wall cavities behind the door of the shack, high voltage leads being run through conduit to the transmitters. A control panel distributes power to the transmitter in use.

The antenna system consists of yagis on 2 and 6 metres (four over four) atop a forty foot steel tower, and a dipole for the other bands.

Occupation is a school teacher (primary level).

Other hobbies are music (choir and organ chiefly) and cricket.

I.T.U. FUND DONATIONS

Donations towards the fund to send an officially Government-recognised delegate to Geneva next year are still being received, but the tempo has slowed down during the last couple of months. It now lies largely with the Divisions by the way of publicity over official W.I.A. broadcasts to continue to enliven interest and subsequent subscriptions. Our nominated delegate has been made known and all members and others should give their valued support to the Fund to ensue that he is no less favorably placed in status and financial support than other delegates who attend this International Conference of utmost importance to every Amateur

Your donations should be sent to:—
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Melbourne, C.1.

The following are the list of additional donations to the 7th December:—

£25/0/0: South Australian Division, VK5WI.

£5/0/0: N.S.W. Amateur Radio Co-op. Society.

£2/2/0: C. C. Quin, VK2AWQ; K. H. Meallin, VK2NJ; G. C. Ramsay, VK5GD.

£1/1/0: R. G. Graf, VK3CT; J. W. Jackson, VK4CN; G. N. Harley, VK4GH.

£1/0/0: R. H. Yuile, VK2HU; W. P. Nelson, VK2KH, VK3 Anonymous, Caringbah, R. S. Mackie, VK3AVA, E. H. Jenkins, VK-3QK, A. W. Adams, VK3VJ; J. G. Halyday, VK4HZ, H. R. Hodgson, VK5AP, F. K. Tapley, VK5FJ, H. Robinson, VK5HN, J. P. Sullivan, VK5JK, G. F. Lucas, VK5LL; A. F. Leal, VK6LQ, R. B. Monfries, VK5RB, E. Brandon, VK5EG, G. Cranby, VK7GC; D. Jose, Nauru, VK9DJ, K. A. Hancock, Tas.

Under £1: E. H. Zahmel, VK4MU (10/6); J. Jeffreys, N.S.W. (10/-); G. Wells, Tas. (10/-).

The progressive total receipts to 7th December are £1,866/15/6.

USING BC459 WITH VHF OVERTONE OSCILLATOR

Although using the BC459 (7 to 9 Mc.) as the v.f.o. for a 50 Mc. transmitter may be old stuff to many v.h.f. men, it is possible that some newcomers to the World Above 50 Mc. may not realise how easy it is to couple one of these Command transmitters to the ever popular overtone crystal oscillator.

Fig. 1 shows the method of coupling a BC459 to the grid of a triode overtone oscillator. The oscillator portion of the circuit (components to the right of the dashed line) is identical to that used in simple transmitters described in the V.h.f. Transmitters chapter of recent editions of the Handbook. To the left of the dashed line, we see the co-axial line from the v.f.o., a 220 pF. coupling capacitor and the connections to the transmitter crystal socket. All connections to the transmitter end of the co-axial line should be as short as possible.

One interesting feature of the arrangement is that the overtone circuit takes on an entirely new look merely by replacing the crystal with the v.f.o. connections. The instant that the crystal is removed and a ground connection provided at the crystal socket, the circuit becomes that of a frequency multiplier. In this case the stage becomes a frequency tripler using 8 Mc. excitation for 25 Mc. output. Incidentally, the stages that follow the 12AT7 oscillator are also of Handbook design.

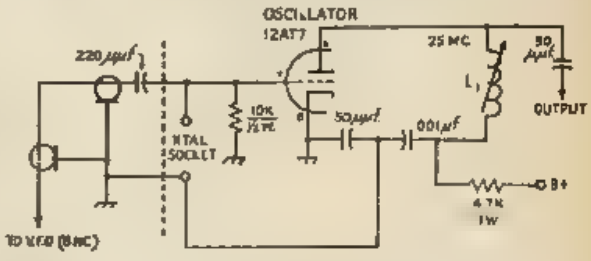


Fig. 1.—Circuit diagram of a v.h.f. overtone oscillator driven by a Command transmitter W9DRY uses a BC459 (7 to 9 Mc.) as the v.f.o. and drives a 50 Mc. frequency multiplier with 25 Mc. excitation obtained from the 12AT7. L1 is 24 turns No. 30 gauge enamel close-wound on a 3/8 inch slug-tuned former.

The required v.f.o. range for covering the entire 50 Mc. band is 8.333 to 9 Mc. Stable output throughout this range is obtained here at W9DRY by operating with only 105 volts applied to the oscillator and both the plates and screens of the amplifier tubes of a BC459.

R. L. Sherwood, W9DRY, "QST" Dec. '57.

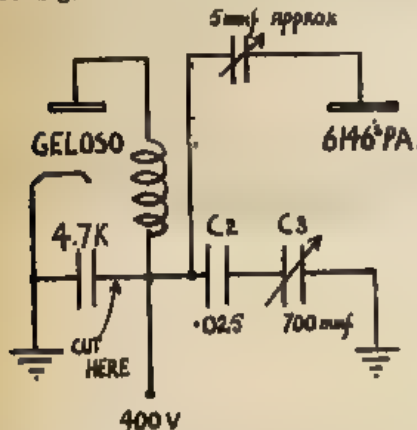
HINTS AND KINKS

NEUTRALISING THE STAGE AFTER THE GELOSO V.F.O.

This bridge circuit is suitable for the task. It has the advantage of easy adjustment to take care of

$$\frac{C1}{C3} = \frac{\text{Tube grid-plate capacit. (Cgp)}}{\text{Tube input capacitance (Cin)}}$$

Now to arrange this bridge it is necessary to remove the by-pass to earth capacitor from the tank coils in the Geloso unit as this is many times too big.



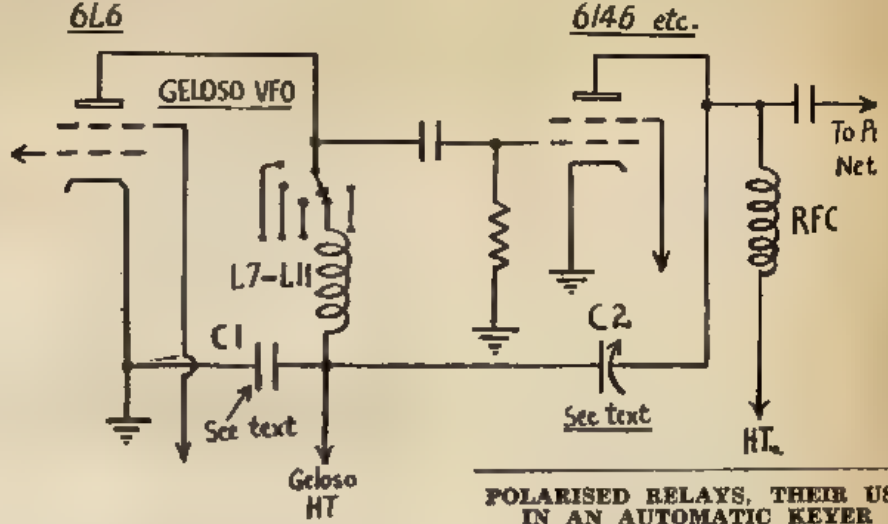
The neutralising is done by altering the value of C3 and this control is brought out to the front panel and the positions for each frequency can be marked on the panel. C3 is a receiver-type variable. C2 is to protect the h.t. in case the plates of C3 short.

The high inductance of the slug-tuned Geloso coils avoids the danger of C3 forming an unwanted series-tuned resonance circuit.

—Arnold Holst, VK3OH.

NEUTRALISATION OF SINGLE-ENDED FINALS

Many Hams have found it a difficult job to stabilise their p.a. stages using the new 6146 tubes. This article deals with a transmitter using a Geloso v.f.o. as the driver stage, but the procedure can be applied to any transmitter using a similar circuit design. Instability in the p.a. shows up when tuning the final tank condenser. Under tuning conditions the final grid current should remain quite steady, any variation indicating that regeneration is taking place.



In order to neutralise the final stage it is necessary to take a small portion of the output power and feed it back to the p.a. grid 180° out of phase. When using the Geloso as a driver, the obvious place to apply this is at the bottom or B+ end of the output coils (L7 to L11). Now the feed back power depends on two things, firstly, of course, the size of the neutralising condenser C2, and secondly the size of the r.f. by-pass C1. The larger this condenser is, the greater the feedback power needed.

To work out the values needed for both the by-pass and neutralising condensers, we can use a formula taken from the A.R.R.L. Handbook which gives the following:

$$C2 = \frac{5000\ Cgp}{Cgf}$$

In this formula C2 is the capacity of the neutralising condenser, 5000 is the size of the by-pass condenser in the Geloso. Cgp is the grid-plate capacity of the p.a. tube or tubes, and Cgf is the gride-cathode capacity of the p.a. tube plus the output capacity of the 6L6 or 6V6 in the Geloso. Assuming the use of two 6146s in parallel and a 6L6 driver we have the following:

$$C2 = \frac{5000 \times 0.44}{(13.5 \times 2) + 12}$$

$$= 55 \text{ pF. approx.}$$

Now obviously this is far too high in value for a neutralising condenser, so we have to reduce the capacity of the Geloso by-pass condenser until C2 becomes a reasonable size.

The size arrived at was 500 pF., a ten times reduction, which also gives a ten times reduction in the neutralising condenser and brings it out at 5.5 pF. which is a more practical size. This can be met with a small three-plate condenser with double spacing. One of the double-spaced trimmers from an AT5 or a No. 11 is ideal if cut down to three plates.

Neutralising procedure is to adjust C2 for least variation in grid current against final plate tuning at the highest frequency used. By the way, the reduction of the 5000 pF. condenser to 500 pF. has no effect on the output of the Geloso, however the coils will need to be re-peaked for maximum grid current on the final.

—Ron Fisher, VK3OM.

POLARISED RELAYS, THEIR USE IN AN AUTOMATIC KEYER

(Continued from Page 11)

writer uses a piece of heavy gauge copper wire). It is suitable for use as a high-speed keying relay, one now being used in a keying circuit for translating the signals from a Wheatstone tape transmission into Morse.

The circuit of the keyer is given in Fig. 2. The 6H6 is used as two opposed half-wave rectifiers, charging the capacitors to about 4 volts, more than sufficient to operate the relay. The resistors are used to limit the current flow caused when both brushes make contact, this occurring if the tape breaks or when the end is reached. The relay is adjusted for the bistable operating condition, a current of 500 microamps. being required to effect clange-over.

The rest of the keyer is as described in an earlier article, the polarised relay replacing the Eccles-Jordan trigger in the original circuit. The relay circuit has the advantages of simplicity and ease of operation, being unaffected by variation in line-voltage and components. It can follow Morse at speeds up to 40 words per minute.

Many other uses for polarised relays in Amateur equipment could be listed, but the readers will see that the slightly greater cost of the relays is offset by their advantages in applications where discrimination between polarities is required, or where only small currents are available.

NATIONAL FIELD DAY CONTEST

The draft rules of this Contest having been ratified by Divisions, the rules will be as published in the September issue (p. 16) of "A.R."

It is hoped that the amended rules will entice more participants in this event. There are sections for h.f. and v.h.f. this time.

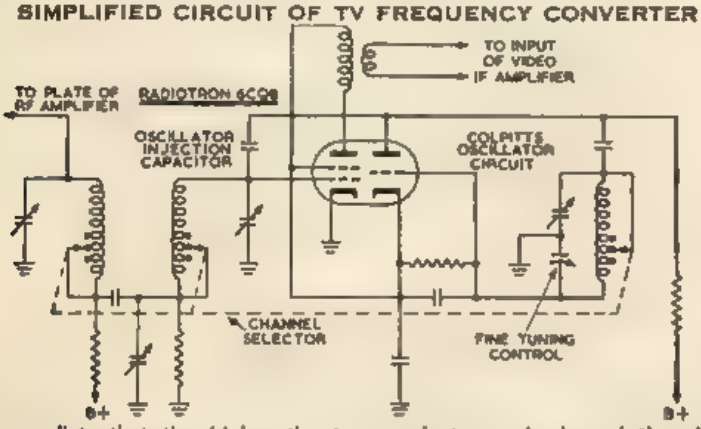
Remember the date: **Sunday, 25th January, 1959.** Have your portable equipment ready to enter this Contest.

RADIOTRON
TELEVISION VALVE SERIES
Frequency Converters & IF Amplifiers for TV Receivers

The desirable requirements for TV frequency converters and if amplifiers can be summarised as follows:—

(a) transconductance should be high to provide as much gain as possible in the low-impedance, wide-band circuits used in a TV receiver.
(b) the equivalent noise resistance should be low for good signal to noise ratio in the frequency converter stage.
(c) there should be little feed-through from the oscillator to the rf stage to keep the oscillator radiation to a minimum.
(d) the oscillator section of the converter should have good frequency stability, and possess characteristics which make oscillation of the right amplitude easy to obtain
(e) the application of a variable control voltage to the grid should not have any appreciable effect on the input impedance to the valve when used as an if amplifier.

SIMPLIFIED CIRCUIT OF TV FREQUENCY CONVERTER



Theory predicts that the higher the transconductance (g_m) and the sharper the cutoff characteristic in the mixer section of a converter, the higher will be the conversion transconductance (g_c). The lower the bias required for plate current cutoff, the smaller the oscillator injection voltage that is required for maximum g_c and hence the lower is the oscillation radiation. Multigrid types of converters, i.e. those in which the signal and oscillator voltages are applied to separate grids, can be shown to be noisier and to have lower g_c at high frequencies than the types in which both voltages are applied to the one grid

For the oscillator the most satisfactory operation is obtained by using a triode of high g_m and medium amplification factor (μ) in a circuit which will provide good frequency stability The Colpitts type is often used for this purpose.

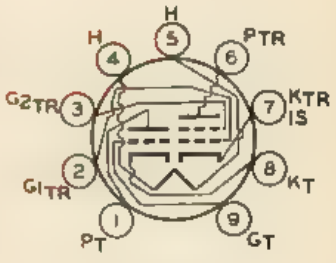
The series connection of the oscillator and mixer sections of the converter across the B+ supply offers the advantages of a reduction in current drain and more constant oscillator injection over the frequency range, due to the current-stabilising effect of this type of connection.

To maintain a desired relationship between transconductance and input impedance for valves used in the gain controlled stages of if amplifiers an unbypassed cathode resistor is commonly used; the use in if amplifiers of valves with internally-connected suppressors then presents difficulties in obtaining satisfactory stability. Valves featuring a tetrode construction avoid this complication

The Radiotron 6CQ8, which has been especially designed to meet the requirements mentioned above, features a plate current characteristic with a sharp knee at relatively low plate voltages and mixer operation with good linearity in the frequency converter stage in the TV receiver. The tetrode construction of the 6CQ8 avoids the difficulties in stability outlined above, and together with the other characteristics of this valve, allows high performance to be obtained as a TV if amplifier The tetrode section is also suitable for use as a sound if amplifier and agc amplifier The triode is suitable for use as a sync separator and af amplifier, and as an af output stage where only moderate output is required. The triode may also be used as a cathode follower driven by the tetrode section in the video amplifier stage.

6CQ8

SOCKET CONNECTION
Bottom View



PIN 1: TRIODE PLATE
PIN 2: TETRODE GR O No.1
PIN 3 TETRODE GRID No.2
PIN 4. HEATER
PIN 5 HEATER
PIN 6. TETRODE PLATE
PIN 7. TETRODE CATHODE, INTERNAL SHIELD
PIN 8: TRIODE CATHODE
PIN 9. TRIODE GRID

V H F

Frank P. O'Dwyer, VK3OF
190 Thomas Street,
Hampton, Vic.

Lance VK4ZAZ has struck oil. Following his comments on the year's activity and views on the band, here is a letter from Bob 6BE: "Having been fortunate enough to have six months L.S.L. during the first half of this year, I have been in the position of being able to sit looking for DX at all hours of the day and night; I have done just that. First DX break through to VK6 came on March 9 with a JA opening. Others followed at very frequent intervals (daily and twice daily for up to ten days at a stretch). These openings lasted till May, with two or three being experienced in June. July and August brought nothing although the VOSK was heard several times on 49.6 during this period.

"On Sept. 6 the game was on again with JAs coming in at very good strength. Openings since this date have been very frequent, daily for days at a stretch. During this period VK6s had their first taste of T.E. when two or three openings occurred, the first on record in this State. All other contacts appear to have occured on F.2.

"Apart from JA working, VS2DQ has been contacted by several stations, VU2?? was heard by one, DUs have been heard working JAs, ZLs were worked for ten consecutive days from May 4 (F2 also), and one E. opening into VK5 was worked early in Oct. There have been several other interesting signals logged, but no identification has been possible. (If only ALL the v.h.f. stations would tune the band any time they make a transmission.)

"Now regarding 4ZAZ's comments re VOSK. There is one freq. that he has left out, 48.3 Mc., and I'm afraid this one spoils his theory as it sometimes broadcasts a different programme. Hardly possible for a parasitic. Theories here are that it is a repeater station intended for local consumption No, we don't agree with 4ZAZ that it is a parasitic. Other arguments against are: (a) Its freq. is too stable. It has clung tenatiously to 48.6 since at least March 9 when it was first heard here. (b) It has been copied by at least two f.m. rx in VK6 and was good copy. Deviation appears to be 75 Kc. (c) It QSLs and I have its card in my possession.

"That raw carrier on 49.6 is not as raw as it seems either. It has modulation in the form of a 30 or so cycle tone. Other similar carriers have been heard in VK6, some with tone of about 1 Kc. and some with both 30 cycle and 1 Kc. tone. Some of these appear to beam from the Middle East, and others from the north. Suggestions from overseas have been that they belong to telemetering stations on oil pipe lines.

"Other commercial sigs have been heard here, which have not been identified, but which appear to be inter-island and vehicle services —some f.m. and some a.m. Freqs. are from 49.6 to 50 Mc. Some have rich American burrs, while others speak a foreign language. Sample, 'What about one of the speed boats buddy? That any use?' 'Send 'em over on a tug boat . . .' Station names sounded like Prawn, Prapnee, Rumbye. One American voice on another net is deliciously feminine. Doesn't take any nonsence from the boys on the other stations either These all appear to beam between N.N.W. and N. Other carriers have been heard which obviously belong to harmonics from lower bands, e.g. Radio Australia on 48.9 beaming from the east at 0300 E.A.S.T. Work that one out VK3. Radio Peking has also been heard, but in the 50 Mc. band in VK6. F.m. was present in this case.

"The position at present is that JAs are coming in almost daily in very good openings (in fact I had to break off writing this letter to take part in one, I worked 11 stations T.E. in the 100 minutes the band was open). Up to 30 odd stations have been worked in one sitting. My present total is over 150 different JA stations in over 300 contacts. I have missed quite a few good openings through going out, too, come to think of it. Finally, I must correct a misstatement in the Nov. issue v.h.f. notes. There has been no authenticated instance of the VK6-ZS path being open, though it is possible that sigs have been heard on two occasions." (Regret error.—V.h.f. Ed.) "We think that the trouble is that there are not enough active ZS stations to ensure the constant monitoring of the band that is necessary to take advantage of any opening. Think the above covers the position over here adequately. —73, Bob 6BE."

General.—JA openings remained fairly constant during the first three weeks of Nov. and then fell off. The period culminated in the great opening of the 16th when VK3s had their first experience of JA QRM. That coupled to Sporadic E and extended ground wave work at the same time proved an enlightening experience to new operators on the band and was reminiscent of the years around 1950 when activity in all Divisions was at a very high level with Sporadic E openings coming thick and fast. More so when a few of the old timers were heard making a re-appearance on the band, pick and shovel apparently having been used to clear off the accumulated dust on their equipment, it having been idle so long

Vern 4LK, as well as working into other Divisions and ZL, made the Brisbane gang happy by contacting them, in the meantime having his first contacts with Townsville, 210 miles away. That ZL must have been the first VK-ZL QSO for the season. Strange the way the ZLs have been missing so far. The VK3 gang missed an opportunity to work VK7 on the 18th also, they were heard over there.

KR8AP commenced skeds vee beamed at W land, 50.1 Mc., 0800-0930 E.A.S.T., on Nov. 30, with alternate 5-minute periods of transmitting and receiving. He also has a vee beam aimed at VK and if conditions indicate an opening or he hears the JAs or others calling VK, he shall be on the job in this direction. KR8AK on 50.120 Mc and KR8BS around 50.1 Mc. should have been active by the middle of Dec. And speaking of that direction, both Jock 3ZDG and David 3ZAQ heard a DU under the QRM during the opening of Nov. 12, the first reported in VK3. Nov. 30 found KL7AUV working into ZL and JA. VK2ZKR was reported heard at 1210 E.A.S.T. on Nov. 23 by a VE7. The activity is there boys, go and work it!

It is up to you yourself now to judge whether the Ross Hull Contest has now degenerated into a farce. By Dec. 1 some VK3 stations had registered 80 local contacts to score points. Very hard on the country v.h.f. man. Surely the time has arrived to run the Contest in two divisions, one for 50-54 Mc. and 56-60 Mc., DX contacts alone to count, the other for 144 Mc. and higher where any contact would score, local or otherwise.—3OF.

ROSS HULL MEMORIAL V.H.F. CONTEST, 1958-59

Notification has been received from the Federal Contest Committee that they supplied incorrect information to "A.R." for this Contest. Under the heading of Contest Calendar, the Rules were incorrectly stated to be the same as for 1956-67.

The Rules for the Ross Hull Memorial V.H.F. Contest 1958-59 are the same as for the 1957-58 Contest. These were published on page 11 of the August 1957 issue of "A.R."

The 1958-59 Contest commenced on 1st December, 1958, and concludes on 31st January, 1959. A special award will be issued for the greatest distance over 3,000 miles.

ZLs LOSE 50-51 Mc.

Just as we were going to press a message was received from ZL2AGD stating that "As from 1st January, 1959, the ZLs lose 50-51 Mc. The 51-53 Mc. section will still be available on a shared basis. The Government is starting t.v. experiments on 54-61 Mc. during 1959."

NEW SOUTH WALES

Hi, chaps, well how did your Xmas go, or does it still linger on, pretty hectic, eh? Well, so passes another year which we feel has been full as regards organised v.h.f. activity meetings, field days, fox hunts, etc. Of course this has only been possible because of your participation and support of Institute affairs, and whilst on this subject it is perhaps opportune to briefly describe to prospective members some details of the V.h.f. and T.v. Group. The Group is a section of the W.I.A. and membership of the W.I.A. allows you full status in the Group, there is no extra fee. All that is required, if you wish to join the Group, is the completion of a form for our record purposes. Visitors are welcome at all times, and should you desire, your membership in the W.I.A. can be arranged at the meeting. Meetings are held on the first Friday of each month in the T.v Studio of the Gore Hill Tech. College, right under the t.v. towers. The lectures cover quite a wide field, and should you perhaps be more inclined to the d.c. bands, but cannot attend the Div. meetings, come along as you will probably be surprised at the number of d.c. fans at the meetings.

For the v.h.f. enthusiast there is the night fox hunt held each month on 144 Mc. and generally one field day or fox hunt held on the Sunday of each month. There are scrambles, tours of inspection, contests, Xmas party, annual auctions, etc., all geared to keep you interested. So accept our invitation and come along

Meeting.—At the Nov. meeting an interesting lecture was given by John 2ANF on test equipment. John dealt particularly with v.t.v.m. and provided us with an interesting circuit. Keith 2ZJK described a natty transistorised 28 Mc walkie-talkie he had built, and Bob 2OA gave some points on overtons osc

Field Way.—The spring field day was well enjoyed by participants and good signals were heard from portable stations. Results will be given next month.

Fox Hunt.—A very enjoyable evening was held on Nov. 28 and eight cars participated. Phill 2ZBB was fox and he was found by 2ZBG/2RX. A somewhat surprise, but very delightful, supper was given by Avril 2ZBB's XYL at their QTH following the event.

Gosford.—The Group was well represented at the Central Coast Convention and took away prizes and disposals equipment.

50 Mc.—Two major openings occurred during Nov., on 8th and 18th, during which openings occurred to JA, VK3, 4 and 5 simultaneously. Otherwise the band has been fairly quiet, but the activity has urged the building of equipment for the band.

144 Mc.—Nov. has seen the more frequent uses of v.f.o's. and very stable signals have been heard from 2ZFC, 2ZBB and 2ABZ. The 4-8 meg. Command has been employed and with doubling in the final provides a very stable signal source.

Future Events.—Jan 21, hidden tx hunt with 2ZBG/2RX as fox. Please note that there will be no January meeting.—2AWZ

VICTORIA

6 metre operators in VK3 experienced the best break through since the re-opening of the band on Nov. 15. VK4 signals were first heard about 1800, then later on VK2, 5 and JA signals, all at times over 59. Quite a few VK3 stations were operating and combined with the DX, the band was seething with stations. VK2 and VK5 signals were only in for a short time, but the VK4 and JA sigs were heard up till around 2400 hours. The long duration of the break through enabled quite a few locals to work their first JA. Things stayed fairly quiet in VK3 until the 27th, when the band opened to VK4 and for a short time to VK2 in the evening. Signals were again at very good strength and the locals managed to QSO quite a few new VK2 and VK4 stations.

The newly instituted v.h.f. scrambles are proving quite popular and over 20 stations were on deck for the Nov. six and two mx scrambles. Jack 3VT won on 2 mx, while Ian 3ALZ and Ron 3AHJ drew for first place on 6. For those who may not know, the 2 mx scramble takes place on the second Sunday, and the 6 mx scramble on the fourth Sunday of each month, both between 1945 and 2015 hours.

Mr. Don Rodini, who developed the antenna system for the 168 Mc. link between Victoria and Tasmania, was the lecturer for the Nov. v.h.f. meeting. Mr. Rodini described methods for measuring the gain of antenna and pointed out traps for the unwary. He went on to produce experimental curves for 2 and 3 element beams and extended those for long yagi antenna. Mr Rodini pointed out that gain can only be acquired at the expense of space and expressed the opinion that some of the figures quoted for commercial t.v. antenna may be a little bit optimistic.

Seven stations were out portable for the Nov. field day and most were kept busy working quite a few home stations. Results next month.

The next field day will be held on Jan. 25 and will coincide with the National Field Day.—3ZAI.

288 Mc. Active at Anakie, some 16 miles from Geelong, Jim 3ABT has had a QSO with 3AAK and has heard 3AUX on 289.3 Mc. Jim has two 7193s mod. osc., super regen 955 rx. Peter 3ZAV on 289.6 with xtal control, 3 miles from Geelong has been heard by 3ABK and 3BU, but still has to build his rx. Active also in the Geelong area, or just on the verge, are Dick 3ABK, 288.28, xtal control; Fred 3ALG two 7193s mod. osc., with 3BU coming up. Bill 3BU has received his Customs permit for a vidicon camera tube and ordered it from the British Amateur Television Club and hopes to receive it shortly. Also interested in building Amateur t.v. gear are 3UT, 3AWW and 4MT. 4JE has a vidicon camera tube but have no idea as to the progress he has made on his gear.—3BU.

50 Mc. P.R.P.

Advice has been received from Mr. Southworth that P.R.P. will concentrate on scatter research during 1959.

The relation between scattering, particularly T.E. and the solar cycle, is little understood at present.

VKs can assist by reporting on any opening in which scattering is suspected to be present.

Observations made by the writer last summer indicated that during all big E openings scattering was occurring. A number of VK2s, 3s and 5s were heard and worked by scatter.

It is necessary to search carefuly with the b.f.o. on, looking for weak fluttery signals. C.w. is an advantage but not always a must.

C.w. Segment: In the U.S. call areas the first 100 Kc. is c.w. only by F.C.C. regulation. It has been suggested that in VK the first 50 Kc. be c.w. only by gentlemen's agreement.—VK3ALZ.

SOUTH AUSTRALIA

Several new boys on the band this month. Max 5GF, an old-timer on 50 Mc. 8 to 9 years ago; John 5ZDL, who is v.f.o. controlled and has a 4 el. 50 ft. up; Colin 5ZDB with an 807 in the final running 48w. and a 4 el.; also George 5DE, located at Tapleys Hill, with a good take off for v.h.f. contacts. Curl 5ZBL damaged his 4 el. while cleaning it and has only a folded dipole now, what about the DX Curl?

Several chaps on mobile these days. Ken 5BC doing sterling work on W.I.C.E.N. practices with a 50.2 Mc. link based on Mt. Lofty and Mt. Barker. Graham 5ZAP on 50.25 Mc. putting in very strong signals from various locations, and 5ZBZ working back from Willamatown through the hills to the city, quite a nice fat signal, I'm told. Heard Eric 5ZAQ with mobile gear the other night but understand that it is not 100 per cent. yet. Looks as though we will soon have enough mobiles for a fox and hounds contest.

John 5ZBA has his v.f.o. ticking, sounds good John, and Col 5RO has been experimenting with another v.f.o. Ken 5RP realises the potential of a v.f.o. and has a converted AT5 v.f.o. coming up. Gilbert 5GX is building a new modulator and Ken 5KC and Bill 5ZAX are experimenting with wide-band f.m. for link work on 51.6 Mc. and 52.4 Mc. Hughie 5BC at Berri has been breaking through quite often on 50 Mc. and we hear quite a few DX stations calling him. Ron 5MK was heard working 5ZAB at Renmark, could not hear that station myself.

6FD was heard mobile in Adelaide, but have not been able to contact him myself. With the Xmas holidays close at hand, we should hear a lot from visiting 6 and 2 mx mobiles.

Still some activity on 288 Mc. and hear most of my news through George 5ZGA when he is cross-band. Brian Tiddeman now has the call of 5TN, hope you still stick to the v.h.f. band Brian.

JA openings have not been prolific this last month though the 20th was a red letter day, everybody getting their 6 or so contacts. On 15th the VK4s came through at 1200 hours, then the JAs, followed later in the afternoon by the VK2s. The 6th December saw a nice opening to VK7 with 89 plus reports both ways. There has also been some scratchy openings to VK6 and VK4.

An application has been lodged with the P.M.G. Wireless Branch to run a beacon station on the 50 Mc. band by the W.I.A. (S.A. Division). Power, approximately 500w., using a vertical radiator in continuous operation. This is a sound proposition and should be supported by all v.h.f. enthusiasts, and should be considered by other Divisions. It will be of great value in obtaining data for the Geophysical Year and will help our case in respect to retaining the 50 Mc. band for Amateur use. Suggested frequencies are from 50.75 Mc. upwards. Cheers.—5ZAW.

TASMANIA

50 Mc.—7LZ and 7BQ have finally worked into JA. Nov. 12 brought contacts with VK2 and VK4, with JA6 heard by 7LZ. Nov. 13 VK5s were worked, but on 15th, 7LZ worked six JAs in JA2, 4, 5 and 6, and heard JA1, 3 and 9, also VK2, 3, 4, 5. 7BQ was also in on the activity, but no information about his contacts. 7XI, at Devonport has worked Interstate DX this season also, but unfortunately was having a short spell in hospital when the JAs were coming through.

144 Mc.—7PF now operating at Devonport, has been establishing communication with VK7s in other districts. 7LZ and 7BQ in Launceston have been contacted by means of reflected signals from hills surrounding Launceston. Both 7LZ and 7BQ have a steeply rising hill 400 ft. high immediately in the direction of Devonport. 7RL at Stanley has also been contacted, signals over this longer path of 65 miles being better than those to Launceston, 45 miles away. T.v. signals on the coast seem to be always present and it was thought that there must have been a lack of activity in VK3, but this was disproved on 26th when 7PF worked 3ALZ on c.w. and heard 3ZEO, 3ZDW and 3ZDI. 3ALZ reported having heard 7LZ.

288 Mc.—7KC and 7MZ at Devonport gave a demonstration of mod. osc. gear at the last W.I.A. meeting and have interested members. Max Ives has his A.O.C.P. and has built up some gear for this band while awaiting his call sign. 7LZ and 7BQ have also established tx and rx in operation.—7PF.

DX

Frank T. Hine, VK2QL
30 Abbotsford Road,
Homebush, N.S.W.

Conditions for November were rather unreliable from day to day. At 2000 GMT some mornings there would be plenty of DX signals on the 14 Mc. band and then for a few not worth switching on. On 21 Mc. the signals at the same time would be found to come from different continents on successive mornings.

In the interests of the VK DX boys, I feel that Federal Executive should keep them up to date with developments of their submission to the I.A.R.U. regarding getting some stability into the "country classification." Surely there must be something to report at more regular intervals than we have been seeing in "Amateur Radio" The recognised W I A List for their DXCC is miles behind the A.R.R.L. one. Why a lump of rock in an ocean, with no habitation, can be granted classification as a "country" because a batch of Amateurs decide to go there, whilst, for example, OQ0, which has its own separate administration from that of the Belgian Congo, is not granted such classification shows the irrational thinking that is going on. Some issues ago I made comment on the fact that the top DX listed boys must find an outlet for the stalemate when there are no new ones to work. Fortunately the A.R.R.L. has not yielded completely to pressure being applied, but they certainly have made some strange rulings in granting of "country credit". If the term "country" was changed to something more applicable the position would not be so farcical. In case F.E. have not heard it, statements are being made, "The Aust. DXCC is not worth the paper it is printed on."

NEWS AND NOTES

HE9LAA is active on 28 Mc. a.m.

XW8AL, who supplies a.m. activity from Laos, is at present in the U.S., but expects to open up again after Dec. 20.

KS6AF has closed and now operating as W6NZP but is still sending out **KS6AF** QSLs. If you feel yours is overdue, send W6NZP a S.A.E. envelope.

Jan Mayan still seems to be somewhat of a mystery as operation is reported from there by LA3VB/P despite information that there was to be none from there this year. He is on 14 Mc. c.w.

ZD7BE is a new station on St. Helena and active on 21 Mc. c.w. Do not call on his frequency

CR10AA now has his generator, so be prepared for a good pile up when he does come on, as with no batteries to worry about, he may be more active than previously

If you still need a QSL from **FK4DA** write to PA0FX giving all QSO details and he may be able to do something for you.

The QSL position for **JT1YL** is hard to follow. No cards have been received at the VK2 Bureau to date, yet it was reported some months ago that a large batch of cards for all Bureaux were in course of distribution.

Still needing a QSL from **OD5BZ**? Try W5BKO who was the operator of the station and he will oblige if details of the QSO are given.

HV1CN was very interested in the KWM-1 rig used by W1TYQ during his brief period of operation from the Vatican and is planning to get on s.s.b. himself.

FF8AC/GN who has been operating from the new Republic of **French Guinea** closed the end of Nov. Hope you did not miss him, as the new Administration has no plans for Amateur activity from there in the future. He has returned to France along with all other French nationals. French Guinea has been granted separate country status for A.R.R.L. DXCC.

LU1ZA is producing activity from **South Orkneys.**

ZS9M has been heard on 14 Mc. c.w. and **ZS9G** on 21 Mc. a.m.

Although not finally confirmed, indications are that **MP4DAA** from Das Is. will not be a separate country for A.R.R.L. DXCC but count as **Trucial Oman.**

During Nov there was some activity from Communist China. The station **BY1PK** was tied in with a telegraphic competition held in Peiping. Only QSOs with Iron Curtain countries took place. **SU1MS** was also in the hook-up.

FB8UC/FC has been heard in Sydney a few times, but seems to get "stage fright" fairly easily, as he quits after a QSO, and does not work the stations lined up. He is probably new to the game as his c.w. speed is slow. This makes the fourth FC station heard the last couple of weeks but they all seem to follow the same pattern.

Danger Is. where **KH6MG/ZK1** and **W6PBW/ZK1** originated a burst of activity from recently has been granted separate country status for A.R.R.L. DXCC.

If you work **IT1ZW8/IF** and **IT1ZGY/IF**, do not relegate them too far from memory as they were on the Pelagian Is., and once again we may have another added to A.R.R.L. DXCC. Activity expected in March.

Rhodes has been represented on 21 Mc. c.w. by **SV0WAE**. He is an American Novice licensee so keep you speed way down if you call him. He has been heard here round 1000z and 2000z on 21120 Kc.

KL1X will be QRT after Nov. If you are still chasing his QSL, try him at W6FHB.

QSL chores for **SM5WN/LA/P** are probably going to be handled by SM5AHK. **SM5WN** is known to be active on 14 and 21 Mc. c.w. His note is T7/8.

The DXpedition by **OK3EX/M** is due to commence on 21st Dec. and first stop is Albania. The gear has been checked during a run from Praha to Gottwald and gave outstanding results.

VQ4ERR expects to return to Zanzibar as **VQ1ERR** in January.

ZD1KO is active on 21 Mc. a.m. and **ZD1GM** on 21 Mc. c.w.

ZS6I can be found on 28 Mc. a.m.

CE4AU produces a.m. activity on 28 Mc. and **CE4AD** on 21 Mc.

M1B has been reported active on 21 and 28 Mc. a.m.

If he has not already done the deed by the time you read this, **VS9AS** is planning a visit to **Trucial Oman.** There is activity there from **MP4TAC.** VS9AC had a quick one there, but had very few contacts with his 3 watts.

W6SAI plans moving round Europe for the next six months and a good part of it will be operating as **3A2AF** in Monaco on 14, 21 and 28 Mc. QSLs may be sent via **3A2AH** or W6TNS. Plans are afoot also to operate from **Andorra** as well as other choice DX spots.

Juan Fernandez is granted separate country status for A.R.R.L. DXCC as from Dec. 1 and QSOs after Nov. 15, 1945, are eligible for credit. A DXpedition is planned for January to this spot by a number of CE Amateurs, one of which is **CE3AG**. One station will be **CE3ZA** on c.w. and s.s.b. and primary frequencies will be 14030, 21030, 28030, 14310 and 21410, and keep clear of the frequencies when calling. The a.m. side will be taken care of by **CE3ZB** on 14100, 21200 and 28200 QSLs are to go via Box 761, Santiago. **CE3ZG** has been active from there already on 14 Mc a.m.

UM8DX is supplying a.m. contacts for those in need of **KH6ghis.**

VR2XC is a new call from Pitcairn Is.

XZ2SY puts Burma on the s.s.b. map.

FF8AK hopes to have s.s.b. in operation shortly

Further activity is planned from the Seychelles (VQ9) in 1950. Details will be given as they become available.

Nothing further is known at this time as to the granting of separate "country' status for **KR6LP**, who is active from **Okino Erabu-Shima**, which is some hundreds of miles from Okinawa.

Another for the FLCC chasers is **HB9YL** who has been on the air since Sept. Her OM is HG9TT, so if you really need a contact with her and hear HB9TT, he will probably do the chores for her for the time being. My contact was in the reverse.

W2CTN has taken over the responsibility of handling the QSLs for the following: VK2AYY/LH, VK2FR, VR2DA, VR2DK, FK8AT, XZ2TH, ZD2DCP, JZ0HA, VK9BW, 9G1BQ, OX3RH, CR9AH andw VQ3CF This sounds alright on paper, and despite the good job he did with VK2AYY/LH cards, there were big batches arrived out here for Alan, necessitating frequent contact over the air and by letter to keep things straight. It does mean that in some instances the actual DX station has no QSLs on hand to which to reply to those he receives. This could be something that becomes too unwieldly. The list was supplied by 3ZO. Further to this, there is now a QSL Co-Op in the U.S. How it functions I do not know, but it is apparently in opposition to the A.R.R.L. Bureau.

ACTIVITIES

The early deadline this month has apparently been overlooked by most of the correspondents, so our list is small.

7 Mc.—2AGH: W3*, 4*, 5*, 6*, 0*. **2QL:** ZS, OK. **WIA-L3022** UA3BP, YU2ARS, JA, W. **BER3195** DL, G, KR8BW, LZ, OK, SP, UA, UA9, UB, UP, YO, YU, 4X4KK.

14 Mc. C.w.—2AGH: LA6U*, KR6BW*, KM6BL*, VP2KFA*, KC6JC*, BV1USB*, LU0AAW*, FW8AS*, UR2AK*, VS9AQ*, CX8AD*. **2AMB,** VP2KA*, ZD2GUP*, EL1X. **2QL:** VP2KA*, ZD2GUP, FQ8AP*, VK2FR*, ZE2JD*, TF-5WDD*, LA2JE/P*, UO5RO*, OQ5IG*, ZD-2CKH*, ZS5RP/7, OQ5DF, CR8AC, I5AAW, FB8UC/FC, VP2GL, FB8CJ **2ZE:** FB8UC/FC*, FC8CB/FC*, UD6FA*, UD6AL*, ZC4GT*, UQ-2AN*, 4X4WF*, VQ2MS* ET2VB*, ET2KY*, FQ8AP*, OA4FP*, PY1CD*, VS9AQ* and over 100 Europeans. **3CX** LU9FAZ*, LU5LT*, FF-8AC/GN*, KX6BP*, BV1USB*, KC6JC*, CR-9AH*, TI2LA*, VP2KH*, VS2MA*, FW8AS*, VR1A*, LU3ZQ*, XZ2TH*, ZD2GUP*, LA4CP/P, LA3TD/P, SM5WN/LA/P, **4DO:** YU*, SP*, HV-1US*, UP2NM*, VP2KFA*, LZ2KDO*, HC1C*, YO2KAC*, FF8BF*, ZE3JO*, ZE7JO*, VS9MI*, ET2KY*, FF8BX, VQ3CF, FU8AE, UI6KAE, UQ2AN **WIA-L3022** CR6DA, CT3AI, ET2KY, PJ2AE, OD5LJ, OX3RH, ZC4AM, ZC4IK, ZP-5LS, ZS6AUD, VK2FR and VK3ARX both Lord Howe Is. **BER3105** CO7HQ, DU1OR, FU8AE, JZ0DA, OD5LJ, SV0WC, VQ2RB, VQ3CF, XW-8AI, 4X4JL, 5ARTY.

14 Mc. Phone.—2AGH: EA8BC*. **3AOM:** CE-3CC*, CX2CO*, F, G, GM, HP1CC, VR1A, **4DO:** FM8WJ, GD2FRV, I5FL, ZV1AE. **WIA-L2008:** PY2CK, LU4DMG. **WIA-L2022:** HK6HW on s.s.b., KP8KC/VO1, KG6FAE. **WIA-L2043:** W, KH6, VE, EA8KT, CN8IG, XZ2KN, MP4BBT, 4X4BU, 4X4LA, I5FL, YS1O, ZE7JR, ZD6DT, 9K2AZ. **BER3195:** EA8DJ, HP1CC, KX6, YS-1MS, ZC4AM. **WIA-L2043:** W, MP4BBT, FK-8AR/MM, EA8LM, EA8JE, KR6LP, BV1US, GD2FRV, VK0KT, KJ6BH, VR2.

21 Mc. C.w.—2QL: OD5LX*, 4X4IO*, 4X4CJ*, ZD1GM*, YV5GY, YN1AB, F3CB/FC, VQ5EK, SV0WAE, EL2O. **2ZE:** CE3JP*, ZP5CF*, LU-8BAJ*, ZS3JK*, OK3BG **4DO** KX6BT*, UA-0GF, VK9, VQ4RF, SV0WAE, VQ4EZ, VP6KL. **WIA-L2022** KP4KD, UA0KDA, VE3FD.

21 Mc. Phone.—4DO: KX6BT, JZ0PB, CR-4AE, CO8BL, YN1WL, OA4D, OA4AO. **WIA-L2003:** MP4BCC, CN8BK, YN1EW, CN8EH, EA7ID, 4X4DR, 4X4JT, VK0TC, T12PI, ZS1JA, YN1CJ, YJ1OM. **WIA-L2022:** EI8X, HI8GA, FK8AV, HC9CL, MP4BCC, YJ1OM, ZS6PG, 4X4KV

28 Mc.—2QL: LU3EL, KM6BL. **WIA-L2022:** DL3IR, KW8CQ. VQ4RF, ZS3DY, ZS9G.

Only one piece of info on 50 Mc., but it probably makes VK2ZER a most unhappy man because a VE7 has reported hearing him on 50 Mc. on Saturday, 22nd Nov.

QSL DETAILS

3AGH: VP2VB, UA1BE, UC3CB, YO3FT, KG-4AW, ZD6BX, VU2AJ, VP3VG, I5FL. **2QL:** HB9YL, UA0GF, VP3VG, EA8BF, ZC4IK, VQ-2GW for 7 to 28 Mc., UO5PW, UK3AQ, CN-8IF, GC3CNC, VQ2GF, VS9MI, KR6JF, UQ2AN. **3AOM.** VR1A, F5TRT, KB8BH **3AX.** 3A2CE, EL1K. **BER3105.** BV1US, CT2AI, FK8AS, IT-1PDN, LZ1AH, VO2NA.

And that winds up my final contribution as your scribe. This is the second time I have had to give up this page after starting it off in 1950 as VK4QL. My thanks this month go to **3AGH** who is still able to add one or two new ones each month. It will soon get hard, Graham. **3AMB** whose list shows he has been most inactive this month, **2ZE** who as my successor, I ask you to give all the assistance and co-operation you can for his task ahead, which believe me is not 'a piece of cake". **3AOM,** like most others, found the bands rather flat. **3AX** we welcome to the page; don't let it be the last OM. **3CX** now becoming acclimatised to VK3 after soaking up the VK2 sunshine, **3ZO** why not become a regular? **4DO** very happy that at last he has his W.A.Z. certificate safely tucked away or is it on display, Hal? **WIA-L2002** with his first contribution, not your last I hope, Barry **WIA-L2022,** who has been comparing the qualities of a holiday in VK2 and VK3. **WIA-L2043,** who uses a 4-tube radiogram for his listening. Why not add a converter, Mike? **BER3195,** another 'globe trotter who has found his listening hours restricted at Nhill. Last but by no means least, two of my overseas "spies" in W4KVX and W6YY. Finally, I would like to thank each and every one, even if for only one issue, for their help in building up the page. Please do not lay back in the traces but help John 2ZR to do the things I have left undone to make this page bigger and brighter for all those interested in the art of DXing.

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* Call signs and prefixes worked.
z zero time—GMT.

CORRESPONDENCE

Any opinion expressed under this heading is the individual opinion of the writer and does not necessarily coincide with that of the publishers.

AMATEUR TV

Editor "A.R.," Dear Sir,

I am making this approach through your magazine to try and get in touch with any VK2s interested or active in Amateur TV.

I am very interested in this subject and I am engaged at present in building up equipment for closed-circuit work, with the view to possible transmissions at a later date.

However, there is little point in carrying on experiments unless there is someone else operating close enough to me on 288 Mc. who is active in this field to copy the transmission.

I correspond with Bill VK3BU/T regularly but VK3-VK2 ATV contacts are, to say the least, impossible or a bit tough anyway on 288 Mc. or above.

So I am hoping that anyone in VK2, possibly in the Sydney area, who is interested and reads this appeal will write to me with a view to exchanging ideas, etc., on this very interesting and new field of ATV.

Dennis G. Wheaton, VK2AWW/T.

S.W.L. RULES OF VK-ZL CONTEST

Editor "A.R." Dear Sir,

With reference to the recently completed VK-ZL DX Contest, it may be of interest to many of the Short Wave Listeners who entered this contest to know that there is at the moment some discussion in progress in respect to the Rule covering logging of ZL stations by VK receiving stations.

When the Rules were published in "A.R." prior to the Contest, my attention was drawn to the Rule which stated that we here in Australia could, as the Rule stated, log "overseas and ZL stations." I was of the opinion that the Rule meant that VK s.w.l's. could log and score points for any overseas station in contact with a ZL (or VK) station, but not the participating New Zealander.

All attempts to obtain a ruling in Australia failed, in fact my queries were not even acknowledged, and, with the Contest a week away, I wrote to the N.Z.A.R.T. Contest Manager, who at the time was away from home, and of course did not receive my letter in time for the event.

Assuming that my interpretation was correct, I entered the Contest, but concentrated entirely on stations other than ZLs, scoring a reasonable total for the time worked.

Early in November I received a reply from ZL3GX, Contest Manager, who informed me that we couldn't count ZL stations in our score. (This letter is in the files of the N.S.W. S.w.l. Group). This ruling, although not at all unexpected by myself, has come as a rude shock to some of the members who have filled up a lot of vacant spaces on ZL calls.

It is, to put it very mildly, a very deplorable state of affairs to publish a Rule of such a nature that its misinterpretation could cause a disappointment to many of our younger listeners, who, as beginners, may not have the gear, time, conditions or experience that many of the older members have. These lads possibly would not be able for the stated reasons to receive much of the DX, and no doubt "filled up" on ZLs. I suggest that a disappointment of this nature could easily turn a young lad away from W.I.A. membership at a stage where we need all the strength we can muster.

The matter has been referred to our Federal Contest Committee, and by the time this letter is published, some fresh ruling may have been given. In any case, I trust that an error of this nature will not occur again, and in future contests, rules will be more explicit.

Only other comment I care to make about the contest was the insistance of several non-participating ZLs who have the band to do as they please with for 363 days of the year, but have to splatter a broad signal on the days of the contest. They do their utmost to gabble as long and often as they want (which I admit they are entitled to), but would not enter the contest, being content to make a perfect pest of themselves to s.w.l's. and operators alike. Apart from these chaps and the several who covered large portions of the band with their wicks turned up to the hilt, general operating was of a standard which made listening a pleasure. —D. Grantley, W1A-L2022.

SIGNAL REPORTING

P.O. Box 206,
Brightwaters, L.I., N.Y.

Editor "A.R.," Dear Sir,

Your September issue of "Amateur Radio" carries a fine editorial relative to signal reporting, and comment is requested. Speaking only as one out of 150,000 American Hams, I think some comment is in order.

You are so right regarding the present system. However, I do not agree that the system is wrong, but rather the abuse it is put to. Tone reports are ALWAYS T9 whether raw 40 cycle a.c. or xtal d.c. Readability is usually accurate—Q5 for solid copy, 4 for difficult copy, and 3 for impractical to maintain QSO but will confirm as completed contact. Strength report means nothing as one only has to request the listener to increase his gain to get a 599 report. Rare low power DX will usually get an S3 to 4 report indicating weak signal, yet readability may be Q5.

Studying the suggested systems indicates they offer little change, but report of noise level can explain a lot for a Q3 or 4 report. As to tone, I would MUCH prefer to see a figure not just tone, but rather key clicks, chirps, frequency instability or other factors about which a man may not be aware.

Most awards are based on some degree of report by the present system. Changing this could lead to confusion. While you are working in the right direction, it is felt that if we make honest, practical use of the system we now have, the condition would be improved so a report would have more value and the operator could adjust his speed or QSZ.

How about an editorial on the boys using "bugs" who do not monitor their signal and have no idea what is going on the air? Recently I heard one such signal that had the DX boys crazy as the call was beyond recognition but might have been some new country. They called him furiously but he ignored them. Then suddenly one chap figured out the answer. It was a VK3 using a bug and the call was coming over as 4K3! Recently while working a KL7 who was having trouble, I asked if his hand was frozen and he said, "No, just using a bug for the first time, hi!"

Your publication is read with keen interest and is a wealth of information. Watch for the return of VK3SX. Russ will be back late Nov. with some wild yarns. He and his family spent a week visiting K2QXG before he left for Europe.

—L. L. McMaster, K2QXG.

EXPRESSION OF APPRECIATION

Editor "A.R.," Dear Sir,

We, the organising committee for the South Western Zone Convention, held 15th and 16th Nov., 1958, desire to express our thanks and appreciation to all who assisted to make the Convention the success it was.

In particular, we wish to thank "Amateur Radio" and VK3WI staffs for the excellent publicity we received, the Shire of Ballarat and John VK3HW, who provided the locations for Sunday's activities.

Also the following business houses who assisted with prizes for events held.—

Electronic Industries Imports Pty. Ltd.,
Ham Radio Suppliers,
Philips Electrical Industries of Aus. P/L.,
Radio Parts Pty. Ltd.,
R. H. Cunningham Pty Ltd.,

also Chris VK3AXU and Gordon VK3AGV, of Colac, for their advice and council.

We trust that those members who attended the Convention enjoyed themselves as much as we enjoyed meeting them.

—B. M. Stares, VK3ZBB, on behalf of Keith VK3IV, John VK3ZDM, Ian VK3ZCF, Gordon VK3ZEJ and Ron VK3ZER.

AWARDS

RULES GOVERNING "20-K" AWARD

Sponsored by K2QXG

1. Certificate will be issued on receipt of proof of contact with at least twenty (20) of the overseas bases of the U.S. operating under K prefixes, from January 1, 1955, per the A.R.R.L. Official Countries List for that date, or any additions which may be made in the future, subject to possible change in requirements. Must be one each, 20 of the 24 possible.

2. Accepted general rules governing awards used by A.R.R.L. will prevail with the exception that photostatic or photographic reproductions will be accepted with the right to require the original QSL at the discretion of sponsor.

3. "K" and "KN" Stateside will not be accepted. CN2 will not be accepted for KT1, nor OX for KG1, etc. Only ONE KC4, Antarctic, will be accepted, which must be land based.

4. The purpose of this award is to stimulate contacts with our overseas bases, therefore the January 1, 1955, date will be strictly adhered to.

5. Application with cards or reproductions and list of stations and countries claimed, together with 1 dollar U.S. money to cover costs, should be sent to: L. L. McMaster, K2QXG, P.O. Box 206, Bridgewaters L.I., New York. Correspondence will only be answered when accompanied by S.S.A.E. Cards will be returned by registered mail, certificate by first class mail in mailing tube. Foreign will be returned only by first class mail. I.R.C. coupons will only be accepted based on 5c. value, which is exchange rate, i.e. 20 to U.S. dollar and from foreign countries ONLY.

NOTE.—Arrangements are being made for certain foreign clubs or stations to check QSLs from those countries. Since this award is under personal sponsorship, danger of loss to valued QSLs has been eliminated through co-operation of two well known DX men who will assume issuing of awards in event of personal inability. The sponsor assumes no responsibility for loss of cards in process.

At the present time the following countries are accepted: KA, KA0, KB6, KC4 (Navassa), KC4 (Antarctic), KC6 (Eastern Carolines), KC6 (Western Carolines), KG1, KG4, KG6, KH6, KJ6, KL7, KM6, KP4, KP6, KR6, KS4, KS6, KT1, KV4, KW6, KX6, KZ5.

VK2VK has offered to check VK QSLs and handle funds so certificate can be mailed direct from K2QXG.

NOTES

FEDERAL QSL BUREAU

A DXpedition sponsored by the Radio Club de Chile is planned for January 1959. The locale of the DXpedition will be Chilean Juan Fernandez Archipelago and contacts will rate as a new DXCC country. As of November the exact dates had not been finalised due to transport difficulties. Four operators, CE3AG, CE3DY, CE3GI and CE3HL will accompany the expedition for its 10 to 13 days stay on the island. Under the call sign CE0ZA one station will operate on c.w. on 14030, 21030 and 28030 Kc. and 14310 and 21410 Kc. on s.s.b. On c.w. the station will listen 10 to 15 Kc. UP. The listening frequency for s.s.b. will be announced. Another station will use CE0ZB as its call sign and operate on a.m. on 14100, 21200 and 28200 Kc. Listening frequencies will be announced. Equipment to be used includes a Collins 32S1/75S1 32v. 75a. and suitable gas generating plant. All QSLs must be sent to R.C.C.H., Box 761, Santiago. If I.R.C. is enclosed a direct reply will be sent. If no I.R.C. enclosed, replies will be via QSL Bureaux.

W0BLZ, R. L. Olsen, Chief of the South Dakota "War-Whoop," advises that in order to be of assistance to stations needing South Dakota QSOs and QSLs for W.A.S., the above group has made arrangements for a South Dakota week-end for DX stations beginning 2300z Feb. 13 and continuing until 2300z Feb. 23. South Dakota stations will monitor the lowest 25 Kc. in the 80, 40, 20, 15 and 10 mx bands for c.w. stations, and the lowest 25 Kc. of each phone sub-band for stations calling CQ SD.

The 4th European (W.A.E.) DX Contest takes place from 2100z Jan. 9, 1959, to 2100z 11th Jan., 1959. All bands 3.5 to 28 Mc. may be used, but crossband is not permitted. Full details of scoring, logs and other particulars may be had from this Bureau.

During recent months the much heard but seldom worked BV1US has been more generous to VK stations. This is probably attributable to the fact that the present chief operator, Capt. Tony Borgia, was stationed in Sydney and Brisbane with the U.S. Army during 1943 and has a soft spot for VK. BV1US is located at Taipeh, Formosa, and uses a BC610 and a 3 el beam. Tony, who is W6EOU when at home, assures a QSL for all VK contacts and requests cards be sent to M.A.R.S., Taipeh, M.A.A.G., U.S.C.D., A.P.O.63, San Francisco, Cal., U.S.A.

—Ray Jones, VK3RJ, Manager.

CONTEST CALENDAR

Compiled by W.I.A. Fed. Contest Com.

★

ROSS HULL MEMORIAL V.H.F.:

Dates: 1st Dec., 1958, to 31st Jan., 1959.
Bands: All v.h.f. bands.
Rules: Same as for 1957-58.
Special Award for greatest distance over 3,000 miles.

NATIONAL FIELD DAY:

Date: Sunday, 25th January, 1959.
Bands: (1) H.f. (2) V.h.f.
Rules: As published in Sept. "A.R.," page 16.

B.E.R.U., C.W.:

Dates: 0001 GMT. 17th Jan., to 2359 GMT, 18th Jan., 1959.
Bands: 3.5, 7, 14, 21, and 28 Mc.
Rules. As for 1958.

W.A.E.D.C.

Dates: C.W.—2100 GMT, 9th Jan., to 2100 GMT, 11th Jan., 1959.
Bands: 3.5, 7, 14, 21, and 28 Mc.
Note: Owing to lack of support last year to the Phone Section, this section has been deleted this year.

NEW SOUTH WALES

HUNTER REGION

"Probably never before in the history of Amateur Radio has the necessity for adequate representation, internationally and within the confines of each country, been so imperative as today." The foregoing was part of an Editorial in "A.R." nearly 20 years ago when the I.A.R.U. was our representative body. The Editorial finishes thus, "Perhaps never before had a non-member of the W.I.A. had brought home so forcibly the absolute necessity of organised Amateur Radio. If he stays outside he deprives the Institute of the additional strength brought by his membership and also deprives himself of the right to voice his ideas and shoulder his share of responsibility." Chaps what about it? You are a member, you have donated to the I.T.U. Fund, so see if you can get the non-member to see the light. To the non-active Ham may I suggest that you think about the enjoyment your past activities have given you and try and preserve what we have for the up-and-coming youngsters.

At the University of N.S.W., Tighes Hill, Bob 2OA became famous by creating a new record in delivering a lecture of nearly 2½ hours—beat the goon-show boys to a frazzle. Congratulations Bob for a well delivered discourse on the 144 Mc. Converter and I am sure even those who are not interested in v.h.f. may have had some seeds sown to be watered at a future date. The hearty acclamated vote of thanks was the perfect gesture for such an excellent talk. Thanks again, Bob, we will see you again.

JOHN MOYLE, VK2JU, who has been appointed as representative of the Wireless Institute of Australia to accompany the Australian Government Delegation to the Administrative Radio Conference to be held in Geneva commencing 16th August, 1959.

Among those present were VKs 2ADS, 2AOR, 2AFA, 2ZDL, 2CS, 2ZNW, 2RJ, 2AEE, 2SF, 2ANL, 2XT, 2ZL, 2AOR, 2ZMO, 2ZDF, 2ZCT, 2QB, 2ZEP, and Associates Sutherland, Davis, Bailey, Hall, Richardson, Rugg, Jackson, MacLachlan, Grey, and Stebbs. Regrets were expressed for the loss of George 2SO's wife.

Varley was welcomed back after a holiday to the Sunshine State, where he had a good time and contacted several of the boys with his portable rig. 2AAI heard for the first time giving 2AWX a report, 2AOR also sparked up that night. At the time of writing, Wal 2AXH is now in his 25th home since leaving Terrigal last Easter for N.Z. Excellent results were achieved by Bob 2ARG in re-broadcasting Stan 2ZDL and Stuart 2ZDF on 40 as call backs to [illegible].

Browsing through a magazine of 30 years ago, came across an article by Lieut. L. Swain of a rx using A442, A515 and B443, at last we know why Lionel is often unable to copy signals calling 2AWX—he is still using it.

There was quite an exodus of lads and lassies from the Hunter District to look-in at Gosford's Field Day. The weather was at its very best, so was the company, so was the activities, and so was the work of the good ladies with the refreshments. 2BZ, 2FP, 2KQ, 2PZ, 2RJ, 2SF, 2VU, 2XT, 2ZL, 2AFA, 2AHA, 2ANA, 2AQR, 2AOR, 2AGY, 2AEE, 2ZDF, 2ZDL, 2ANU, 2AKP, 2CS, Associates Sutherland, Bailey, James, Jackson, McLachlan. Many brought their XYLs and harmonica and a boat trip in the afternoon got them out of the way. Les 2RJ won the Scramble at his first attempt, congrats. Harold 2AHA likewise and as usual, Dave 2BZ won the quiz. Stuart 2ZDF, looking around some remote spot for the hidden tx spied a lady local yokel and inquired from her if she had seen any strange people about. "Not until you came," said she.

The final Social for the year at Bill 2XT's took place and a good time was had by all viewing slides and playing billiards. Thanks Bill for the use of your place throughout the year.

There is doubt about any meeting at the University of N.S.W. so listen to 2AWX at the appropriate Monday

BLUE MOUNTAINS SECTION

At the October meeting of the Section, we were honoured to have a visit from Dr. Leo McMahon (2AC) and Harry Solomons (2AJZ) who transported a great deal of equipment up from Sydney, set it up and proceeded to fill the ears of the boys with much melodious music whilst lecturing and demonstrating the beauties of selectivity and of having a rx that really sorted out things from the QRM. I saw blank astonishment on the faces of several that such a thing was possible. I can see thoughts of going to s.s.b. were ticking over.

This interesting lecture took up most of the evening and after being thanked for coming by Con 2LZ, all tucked into a sausage supper delightfully delivered by Norm 2QA. A guest at the meeting was Jack Russell (original holder of 2QA), so was interesting to compare techniques.

The month that followed produced several interesting events. Dave 2NK appeared on 2 mx from Lawson and after an evening or so getting modulation troubles straightened out, is now putting out a very solid signal on 2 using a 3 el. beam, 522 tx and AR17 rx; believe a good converter is on the way. Bill 2HZ was also heard on 2 using Wal's mobile equipment and we hope this will tempt him to stay. Don 2ART has also strayed on to 2 mx, using a 522 but have yet to hear him at this QTH.

The November meeting was held at Springwood on 21st and quite a lot of business was dealt with. The offer of a room in the basement of the Council Chambers at Lawson for use as a Section base station was accepted and we will probably soon be able to install some equipment therein so that members can get some air time. This was deferred until the December meeting for decision.

As 3575 Mc has become untenable due to summer QRN, it was decided to abandon it temporarily. As so many members had gone to 2 mx, the Thursday night aked is to be on v.h.f. We expect Keith 2ADK and Dick 2RM to venture away from the DX soon and come up out of the wet. Syd 2AVK has an 8 el. Yagi and good converter going on 2 but tx is a little delayed. (Did you lose that beaut. 8 meg. rock in a flour barrel, Syd?)

A resolution that the Section donate to the ever-important I.T.U. fund was passed without dissent, although a split in the camp nearly occurred in deciding the amount.

Comments were passed on the recent Catalina Park Field Day and suggestions for making next year's "Do" bigger and better were put forward. Bob Pinning requested that morse transmissions be put out for the associates and this will be done as soon as a few more put converters on 2 mx. He and Derek Boyd have theirs going now and Dave Millar has produced an excellent cascode.

Norm 2QA again exceeded himself with supper and all had the inner man well satisfied. Heard Norm make his debut on 2 mx about 8 p.m. on Dec. 4, but appears to have a little trouble in receiving Wal. Maybe he's being drowned in all that r.f. coming off the mountain at Blaxland. Hear that Keith 2ADK is now the proud possessor of a dual-wave transistor set. (Are you going to use it for DX on field days, Keith?) Dave is busy building a 2 mx walkie talkie and believe he is having trouble with white ants in his insulators. They keep blowing up. He has also been appointed C.D.E.N. Radio Co-ordinator for the mountains area. New members to the fold include Jack 2ADF and Kevin Gunning, both from Penrith.

Had a visitor to the shack t'other night. Eric ex-VK2WG, which is now Wagga commercial station. He was most interested in the changes in gear since his day of roll your own, with crystals ground from eye-glasses and counterpoised antennae. When last seen a few days later, he was wrecking several broadcast sets to build up a s.w. rx. New call on the band soon?—2ASZ.

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VICTORIA

As previously advised, the last meeting was family night and thanks to President Fred and his willing band of able workers, the evening proved a howling success in more ways than one.

There were pictures for all, Father Xmas for the tinies, presents for children up to twelve years of age and an excellent supper to round off the night. The meeting was particularly well patronised and extra seating had to be found for the overflow. Fred was right in the thick of things and seemed to be thoroughly enjoying himself.

During the evening, Mr. Dobbyn, who for many years kept a friendly eye on the W.I.A. from the P.M.G's. Department, was presented with an inscribed barometer-thermometer set from the Victorian Division as a mark of appreciation for the many years of pleasant associations with him. It was a little unfortunate that the night was our Christmas "Do" as I am sure that Mr. Dobbyn could have given us some very interesting reminiscences judging by his few remarks. Perhaps our President could persuade him to give us a longer session at a later date as I am sure it would be appreciated.

In the Sunday morning broadcast, prior to the meeting night, President Fred advised the Division that after a long period of effort on the part of Council and the Building Committee, a property had at last been found to house the Victorian Division of the Institute. He also confirmed this statement at the meeting night but as negotiations were still in progress for the purchase of the property, he could only indicate in a general way that the address was somewhere in East Melbourne. By the time you read these notes, the place will be ours, so you might as well pop along and have a look and perhaps enroll in the working bees which will by then be on the go. The address is 478 Victoria Parade between Simpson and Powlett Streets, and on the south side. It is a two-storey residence. At the moment the building is in a residential zone. This means that we will have to be conscious of the fact that we have neighbors and cut out our midnight pavement ragchews and the like, but otherwise our usual activities will be unrestricted. We will be able to run our library with Mrs. May as librarian, conduct our various instruction groups and operate 3WI on the premises, so things will be much on the same basis as they are at the present address. The monthly meetings will continue to be held at the Royal Melbourne Technical College.

The premises are somewhat larger than the present ones and lend themselves quite well to our requirements with very little in the way of alteration. The ground floor will probably accommodate the library and the first floor the tx room and study groups.

From an electrical point of view, the area should be vastly superior to the present site and as good as any that could be found so close to the city. It is also very conveniently placed with plenty of parking space and easy access by public transport.

Plans are well in hand for the installation of the two ½kw. BC610 tx's (we now have) and the v.h.f. set-up should follow soon after. Our President will be seeking assistance, no doubt, for all the jobs that will need to be done and things should be on the move by the time these notes are being read.

We have already received our marching orders from the present address in Queen St. (about six months sooner than expected), so it looks as though we made it just in time.

At the time of writing the method of financing the venture, which will cost about £5,500, has not yet been resolved, but it will probably take the form of a debenture issue suitably framed to suit the needs of all members. It may be possible to include full details of this before the magazine goes to press, but failing that, the February issue will carry the details. It might be a good idea also if the story of the many disappointments which led up to the ultimate triumph could be included. I feel that all concerned in tracking down such a suitable spot are to be congratulated on bringing a most difficult assignment to such a successful conclusion.

To return to the meeting, the following new members were admitted: Messrs. L. J. Laughton, 3APL, J. L. Morris, 3AES, J. K. L. Matchett, 3TL, J. A. Gilmour, D. O. Clausen, A. T. Lewellen, W. J. Vette, and D. L. Seedsman.

Last, but not least, I would like to list the names of those who were responsible in any way for our most successful Christmas night:

Firstly, the eats were supplied by Mesdames Higginbotham (3RN), Stafford (3KS, YF of 3XB), Dixon (3TE), Robertson (3WJ), Morris (Geoff's mother), Buckley, Stebbings (3ZGD), Ryan (3AZR), Wardlaw (3ADW), King, Dennis (3TF), Henderson (3ARV) and Neal (2ZAN). The call signs in brackets belong to the OMs except in the case of Mavis (3KS) who is a YL. I hope I got them all.

Then there was 3MS who loaned the very excellent Christmas recordings which provided the background music prior to the pictures.

Our old friend Ken Milburn (3CW) made a cash donation which was used to buy the sweets. He also played the part of that kindly old Gentlemen.

Mrs. Moncur shopped for the toys and Keith 3YQ donated some pens and pencils used as gifts. Santa was assisted by Mrs. Lancaster and Jay was buzzing around on all sides. In addition, there was a power of work done in arranging the tables for supper and I saw quite a number of the older children helping here. No doubt these were the second ops. of those mentioned above.

The President's thanks to one and all of the above (and any I may have missed inadvertently) for the manner in which they answered the call to arms.

As is usual, there will not be a January meeting owing to the school holidays.

News is to hand that Hans 3AHH was married during last October. As most members are aware, Hans at present is working with the I.G.Y. Committee in Europe. Congratulations are extended to both Hans and his XYL, Angioletta Maria. We are wondering if Hans will now show a preference for phone operation over c.w.?

SOUTH WESTERN ZONE CONVENTION

The Convention was held on 18th and 19th Nov at Ballarat. The first to arrive were Brian 3ADV on Friday and Ken 3AWU and XYL who were met at the railway station by members of the committee.

Saturday afternoon other Hams arrived and were directed to their bookings, etc., from a post set up at the Civic Hall. At 6.30 p.m. on Saturday, all assembled at the "Blue Danube" on Lake Wendouree for the Dinner and Meeting. The guest of honor, His Worship the Mayor of Ballarat, Cr. G. L. Scott, M.L.A., spoke during the Dinner and officially declared the Convention opened.

After Dinner, the YLs and XYLs departed for the picture theatre and the OMs settled down to the zone meeting, an auction, films and a display of gear. At 11.15 the ladies returned and supper was partaken of before departing to bed.

During the evening the prizes donated by the Trade were on display: 6v Gelosо vibrator power supply (R. H. Cunningham Pty. Ltd.); Synton crystal microphone and two minniwatt valve manuals (Radio Parts Pty. Ltd.); antenna tuning unit (Ham Radio Suppliers); QQE02/5 tx'ing valve (Philips Industries); 3 steel tapes and 6 transistor manuals (Electronic Industries Imports).

The official proceedings on Sunday started from the 3HW shack on Tom Boy Hill. John impressed the visitors with the commercial-like set up. The two mx hunt lapsed because of insufficient starters. The 80 mx hidden tx was not heard of after they left the site except for occasional queer noises and control car 3AGV trying to get stronger signals went out about half mile with no results, so pulled into some bushes and became the hidden tx. After a period of waiting, Jim 3ABT arrived by the back door to win after missing the turn-off and having to back track.

Bill 3AMH, a member touring Canada, was able to contact John 3HW from Winipeg and a lengthy contact resulted. 3WI was therefore listened to from the cars.

After lunch proceedings were located at the Wendouree Oval. The all-band scramble was a good success and was won by 3ADV. All stations operated together and were allowed to take up a location within five miles of the G.P.O. and operated for half an hour.

The Ballarat and District Ambulance Service gave an interesting display of life saving techniques which kept the Hams silent for half an hour. Afternoon tea and distribution of trophies then followed, and the Zone President, 3AXU, wound up the day's activities.

Prize winners: 80 mx tx hunt, 1st, 3ABT. All-band scramble, 1st, 3ADV, 2nd, 3ATW. 2 mx contest, 1st, 3ZQ. Hams that travelled the furtherest, 3ZDB and 3XJ. First to arrive,

CHANGE OF ADDRESS

W.I.A. members are requested to promptly notify any change of address to their Divisional Secretary, not direct to "Amateur Radio."

3ADV, 3AWU. Best constructed gear, 3ZEH. Valve (raffle), 3ZEY. Lucky programme, No. 87, to be claimed.

NORTH EASTERN ZONE

This month brings forth a lot of activity in various ways on various bands by members and associates. First and foremost is associate Jim Harrington, who having obtained through disposals a 122 transceiver, has been getting it ready for bush fire network at Euroa. Jim spent a lot of time recently with another member tracing out the connections of an unsoldered plug with eight wires! Left with it working, only to find a few days later perished insulation further up and a few dry joints. Looks like I'll have to take lessons in soldering Jim. Bruce 3AGG has a home-brew rx with all mod. cons, including a most professional look about it. Performance is excellent.

Brian 3ASF is in the throes of building a similar rx, while Peter 3APF is experimenting with the front end of home-built t.v. rx for better results. Nothing unprofessional about this building either. Jack 3PF working South Africans and other DX on 10 mx with 28w. and a piece of wire, good hunting Jack; while just a few miles away, Ken 3KR is working DX on 20 mx with good results. Sid 3CI has a portable two mx rig working. Murray 3HZ very busy at the tc's of local b.c. station when a storm put station off the air for a considerable time. Murray has not much time these days to spend on Ham Radio. Alex 3AT has a new QTH but I don't see any antennae sprouting. What no radio room, Alec? Les 3ALE still talking about migrating to warmer climes.

3ACK, 3ASF, 3AGG and 3JC discussing whether a carrier is modulated or is a series of beat frequencies, the outcome? Nil. That man at Kyabram has a sterba curtain slung between two t.v. masts 100 ft. high, puts a nice signal into Europe on 20 mx with only 10 watts, I've heard the reports. Others on 20 mx getting among the DX are 3AGG and 3JC who hunt together to get comparison reports on their respective beams. 3AGG has a quad, 3JC has a 3 el. beam, nothing much to choose between them so reports indicate. 3AOB has a new 40 mx mobile rig.

Anybody else who wants a mention in these notes had better let me know what they are doing, I haven't the time to snoop as much these days.

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QUEENSLAND

With the prospects of little official activity in Qld. over the Xmas holidays our supply of news will be rather small for the next month or so. However, when Council meets in the New Year things should start rolling again.

John 4FP, our President, took the chair at the Nov. Council meeting for the last time before he went to New Zealand for a touring holiday. He expects to be back in time for the January meetings and said that he can be contacted on most bands as he has his mobile rig with him. Bon voyage, John.

Once again arrangements have been made for the smooth continuation of the Inward QSL Bureau. Bruce 4ZBD has, because of housing problems, relinquished the position and, until further notice in "QTC", all cards may be sent to the box number. At the meeting Bert 4AO inquired if two 522 transceivers could be obtained for 4WI. At the following general meeting it was announced that Chris Everdell had donated a 522 transceiver for 4WI. Many thanks Chris. You have the right spirit!

At the November general meeting discussion was kept to a minimum as two R.S.L. visitors were to lecture on Civil Defence. Group Captain Curnow and his associate gave the Hams a new meaning to Civil Defence. The meeting was given over mainly to question and discussion and by the time the meeting closed, many Hams must have realised just how important to the community this hobby of ours has become. It would appear that there will definitely be State sponsored plans for C.D. E.N. in Queensland and more than ever the responsibility of communication will fall on the country Hams. The city Hams have had the benefit of first-hand information in the way of practical participation in lectures and various trials, but when the question was raised about emergency power, it was found that far too many Hams relied on a.c. power. Ask yourself the same question. "Can you run on emergency power?" If you can't, why not do something about it?

Nominations for the Advisory Committee for 1960 were taken and their names will appear in "QTC".

Of interest to the v.h.f. boys was the announcement by F.E. of the retention of the 6 mx band for a further period of one year subject to a month's notice by the Department pending resumption of the band.

By the time this goes to press our Xmas "Do" will be over and I hope and trust everyone comes along to make it a gala occasion. Merry Xmas to one and all.

TOWNSVILLE

The final meeting for the year was held last night, 27th Nov. It was fairly well attended, two more prospective members for the W.I.A. being present, soon the Club will almost be 100% members of the W.I.A. also. The last examination saw the success of Bob 4ZAY obtaining the full ticket, also the two associate members, C. Bahr and B. Bickholt. Good luck boys and sincerely hope you enjoy to the full the wonderful hobby of Amateur Radio.

Brian McDonald spoke of the enthusiasm of the R.A.A.F. boys in a project to build the W.I.C.E.N. Communicator (Oct. "A.R."). It was then decided that five of the other Club members co-operate and build same. I only hope that this project does not suffer the fate of the last one. The boys decided to have a social get-together at the corner shop in a fortnight's time to finish off a real good year for the Club, which is rapidly gaining in membership.

The band being very erratic lately, have seen the locals come up on 28 Mc. for the brief evening break through to Europe so much so that the first question from the G boys is "Don't tell me you live in Townsville, you chaps are the only ones breaking through."

Allan 4BE in bed suffering from strained muscles. Would help the local road gang in spare moments! Ted 4EJ succumbed at last to the glib tongue of 2AUR and really gone on the cubicle quad. Bob 4RI certainly working his share of DX, never seems to sleep.

Happy to report our Secretary, Ed. 4WH, will soon be back at work again, operation successful. John 4DD and Eric 4EL still away "Down South" on holidays. Bob 4MF finished re-building the house and also a beaut. speech clipper that allows all background noises to come through. Bill 4ZBE taking up new chore and promises to write notes on the v.h.f. band. Don't forget the deadline each month. Len 4GD still on 28 Mc. only and cannot find time to come along to club meetings, same goes for Ed. 4GF.

Bob 4RW had his score total reduced by one as apparently Lord Howe Island has not been granted new country status. This now makes three countries, viz., Sicily 1T1, Corn Island YN0 and Lord Howe Is. VK2/LH. A news flash from Ingham 60 miles north of Townsville reports brief picture on t.v. set by local business man. Well chaps, one and all, I wish you all the best for 1960. 73 Bob.

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SOUTH AUSTRALIA

The notes for the VK5 Division for this month open on a sombre and sad note. The S.A. Symphony Orchestra will play in the background "Hearts and Flowers" as the members of the Council file into the room, dressed in their ceremonial robes of hessian and sackcloth, for the announcement which has filled their hearts with gloom and despair. The announcement is that the usual correspondent for the magazine has met with an accident, and besides having to eat his meals off the mantelpiece, he does not feel up to writing the notes for this month. "Comps" regrets the fact, but he has had to bow to the inevitable. Council might have recovered from this severe blow, but unfortunately "Compe", in his delirium, made the fatal mistake of writing to "Pansy" 5PS and asked him to please help out and do the notes for this month. "Woe is us," "Woe is us," wails the Council. "We got rid of that refugee from the loony-bin, and now he is back to haunt us again." Flattery will get them nowhere, and I intend to do my duty as I see it, even if it means an enforced stay at "Doc's" boardinghouse, for libel. I agreed to fill in for this month on two conditions. The first being that the Editor must not run his red pencil through anything that I might write, and the second that the Technical Editor must immediately be sacked. Just think of it. Pincott walking the streets of VK3, down-at-heels, pinched and hungry, a pathetic figure, the victim of the vengeance of the terror of VK5. Excuse me whilst I chuckle maniakk——maniac——well chuckle anyway.

Getting back to serious business, "Comps" was driving his car along the road near Elizabeth and another car rushed out and tried to bite him on the wrong side, with the result that he finished in the Adelaide Hospital. From what we read in the papers it looked pretty bad for him, but he said in his letter that he was feeling much better, although still a little shaky, but expected to be OK in about a week or so. Anyway, by the time this appears in print he should be quite well and able to fight the libel actions, or the duels arising from his unfortunate choice of a substitute correspondent.

Now for the monthly general meeting for November. This meeting took the form of a buy and sell night. Council met and after some lengthy deliberation decided to get the services of the most handsome, well-built, athletic, brainiest, and photogenic of the members to take over the job of M.C. When I took the job on, ahem, I was a little dubious as to my ability to handle it with success, and I asked Doc 5MD for his opinion. He said, without hesitation, that I had the three necessary qualifications for the job: (1) Grey hair to give me an air of wisdom, (2) A paunch to give me an air of prosperity, and (3) Corns to give me an air of anxiety. I thanked him for his kind words and felt more confident of the job, and together with Norm Coltman to assist me, I feel that I am not boasting when I say that a good time was had by all. My natural sense of modesty does not permit me to say any more along these lines, but I feel that in Norm and myself, the VK5 Division has secured a good combination of brain and brawn. Which is brain and which is brawn, I leave to your imagination! Up the river to you!

Now quite a large number of visitors rolled up to the meeting, and some of these very welcome gentlemen; those I caught up with were: Messrs. R. Bridgeman, Gino Marzar, O. Griffiths, Llewellyn Griffiths, R. Johns from Leigh Creek, to say nothing of two Associates who made the trip from Mt. Gambier, Fred Aslin and James Edlington. Several licensed visitors included J. Sutton (ex-3ZC, now 5OS), Anthony 6CN, and 5AR of Leigh Creek. Two visitors came from Elizabeth. We were very glad to see you all, and hope that you will come again.

Norm Coltman is doing a wonderful job of organising for the VK5 Division. He never misses a trick, and the best compliment that I can pay him I think, is to say that he has worthily donned the mantel of the previous organiser, Joe 5JO.

Bram 5AB is dabbling with s.s.b. Frank 5AE is running a class at Alice Springs for the youngsters who would like to be Amateurs of the future. Jack 5AM has had his share of transformer trouble, but the end of the lane is in sight I am told; has had good results with mobile rig. Eugene 5AV is now back in Adelaide from Ceduna. Dave 5AW is having the time of his life working the JAs, etc., on 6 mx; also active on 2 mx. Les 5AX is doing most of his work mobile in an endeavour to avoid the local man-made QRM. Hughie 5RM, pardon me, 5BC, is always on 6 mx, but I have heard him on 40 mx at times. Dave 5BF is putting most of his spare time into the emergency fire services and on 40 mx occasionally. Bill 5HR was heard on phone, yes, I said phone, on 40 mx in contact with Wally 5DF. John 5JC, our respected and severed Hon. Sec. (may his beard never grow any shorter), has been heard chasing the DX on 40 mx. Ted 5JE has just joined up in the Institute again and naturally can always be heard on 40 mx after the DX.

Jim 5JK is active on the local e.f.s. communications, and can often be heard on 288 Mc., usually in QSO with 5KY. Ken 5KC is very active on 80 Mc., but finds time to handle a little e.f.s. work, to say nothing about the mobile work on 80 and 40 mx. Pat 5KM is keeping the Amateur Radio flag flying at Victor Harbour with local emergency work, and is also active on 14 and 21 Mc. Rex 5KY is not heard so much these days. Where are you hiding OM? Howard 5XA is also another one who is very quiet these days. Bob 5BG seems to have taken root on 80 mx, more often or not assisted in the background by the XYL. Cec. 5BZ does not appear to be very active these days. Brian 5CA, our President (may his shadow never grow smaller), is more or less confined to activity on his Type 3. Brian, don't forget those immortal words, "DX before dishes." Claude 5CH has been heard several times lately at this QTH with an extra good signal on 40 mx. Col 5CJ is another one who is putting a good signal out on 40 mx. Wally 5DF always seems to put a good signal out from Lincoln; never fails to bob up after the Sunday morning session from 5WI.

It is remarkable the number of Amateurs throughout Australia who have, over the past month or so, made regular enquiries as to the condition of Joe 5JO. Practically every contact that I have had lately has been prefaced by this enquiry, and so it is with considerable pleasure that I am able to announce that he is home from hospital and is reported as doing well, even to the extent of being allowed occasional visitors. His cheery voice was heard recently over the Sunday morning 5WI session, and he was quite happy to be able to speak to all the boys and thank them for their expressions of sympathy and also for the number of get-well cards that he had received.

At the moment of writing, Inky 5WF is touring the Eastern States and having a good time. He has not been the best lately, he picked up some sort of throat infection Des (ex-5DK, now 7DK) has been heard on phone and c.w. from Tassy. Don't forget to give him a shout if you hear him, he would like a chat with the VK5 boys. Alan 5DU, Carl 5SS, Frank 5MZ, Jim 3LM, Max 5OS, and that stranger to VK5, 3MZ, can be heard each night on 40 mx in their regular sked. Jim 5FO is busy with e.f.s. work, but as yet has no regular shack. George 5GB is doing a good job of re-broadcasting 5WI on 80 and 144 Mc. each Sunday night. Gordon 5HM always seems to be on 40 mx at all sorts of times and can always be counted on for a yarn. Harvey 5HQ is as busy as busy as busy can be, but finds time to pop up occasionally at the monthly meetings. Arch 5KK is heard occasionally down at Lucindale on 40 mx. Have any trouble with the Blacks down there Arch? Lance 5XL is very interested in group activity and tape recording. Lloyd 5XM is a consistent e.f.s. helper and seems to be enjoying himself immensely. Laurie 5XN is now one of the upper-crusters in Amateur Radio; he is playing around with television but finds time to have a go at the 14 Mc. DX; would you make me a t.v. set, please, Mr. Werner, Sir? Graeme 5XV at the moment of writing is in the midst of his Uni. exams. and naturally has had no time for Amateur activity. The set-up at his QTH is a bit Gilbertian. Being the son of Gordon 5XU, it is a question of the first one up is the first on the air.

You are probably all aware that I have a grandson, if you don't know, it is only because you have seen me first and dodged around the nearest corner. Anyway, he and I get on very well together. Anywhere you see me, you see him, in fact I find it difficult to get on the air without him taking charge. He is only four years old, and has already put me in bad with my son-in-law and daughter by proudly saying his grace in front of the toffy-woffy visitors as "Two four six eight—bog in and don't wait," and giving me full credit for teaching him! To make a short story long, he now goes to kindergarten, and when he came home the first day my XYL asked him if he said grace at his lunch. He said he did and volunteered the information that he clasped his hands together, just over his mouth, and everybody then said their grace. My XYL then said proudly to him, "What does Grandma's good little boy say for his grace?" MY GRANDSON then said, I always say, "Hello See Coo, Hello See Coo, Hello See Coo," just like Grandpa!! My explanation that he was only putting out a general enquiry did not go over too well, and I can still see my XYL, as she said in tones more of sorrow than of anger, "Petals, how could you act that way, the world will think I have married a bodgie." Somehow I can't seem to take a trick since my Grandson and I teamed up together.

I understand that the VK5 Division go out of business this year as the Contest Committee. I don't think anybody will dispute me when I say that they have done a wonderful job under extreme difficulty at times. It is very hard to please all the people all of the time, and the fact that all contests have functioned so smoothly speaks for itself. Good work boys.

Fred 5MA has been limited to using his 22. There is a new starter up the Murray Valley these days, Harold Fisher (5ZAB) who is well satisfied with his 50 Mc. results. Welcome OM to the good old game of Amateur Radio.

Ron 3OM came along to the meeting this month and I did not put him in the official list of the visitors because I was a bit canny, and thought he was a spy sent over by that Pincott joker in Victoria. I had a chat with him and found him an extra good scout, which rubbed out the spy angle.

Colin 5XY is another one who has been a little quiet on account of exams., but as he came out Dux of Prince Alfred College this year, he can be excused. Albert 5ZL has been kept busy with his interest in young people's clubs although he has been heard on 80 Mc. at various times. Keith 5ZY is heard with his skeds with VK3 quiet often. He and I usually nod to each other in the members' stand at the football and exchange reminesss—remininsse—remmminn—well we chat about old times. Charlie 5ON is heard occasionally on 40 mx, but I understand that his main interest at the moment is bowls. Les 5LC has been heard loud and long on 21 and 28 Mc. using his cubical quad, also he has been heard mobile on 40 mx at times. Luke 5LL is to be heard on 40 mx with his well known brand of home spun philosophy. Jack 5LR is getting more than his share of the DX on 21 Mc. and yet he still finds time to continue with his building of a t.v. set. Pat 5LT is a regular 20 mx DX hound, and I think that his Port Lincoln signal is well known throughout the world.

Bob 5RI is experimenting with transistors and has also been heard on the air with mobile equipment. Reg 5RR has been in the throes of rx trouble; OK now OM? His 122 will give him good service as a mobile station.

5WC, which is the well known Woomera Radio Club, is still without its club rooms, although I have it on good authority that they have been offered a little . . . (Sorry, had to censor the rest, this scribe would be better at a smoke night.—Ed.) Wick 5WM has gone cuckoo on mobile operating. Austin 5WO at the time of writing has pulled his tower down (don't ask me why) and is in the throes of putting up a new one.

Gordon 5XU has been purposefully left to last so as I can express my thanks for all the assistance he has given me in compiling these notes, and also for the help he gives me in the preparation of the weekly paragraphs in the daily paper. The amount of work that this joker puts into Amateur Radio in this State has to be seen to be believed, and if there is anything in the saying that one only gets back from any hobby as much as one puts into it, then he must be getting plenty. Long may he thrive.

Well folks, this is it, believe it or not, this is the end (Hooray!—Ed.) The men in the white coats are fastening on my special jacket, assisted willingly by the members of the VK5 Council.

On behalf of the VK5 Council and myself, I take this opportunity of wishing you all a Happy New Year and plenty of what you want from Amateur Radio. One thing I would stress, and I say it in all seriousness, don't forget Amateur Radio is only a hobby and should be kept on that plane. Be tolerant, remember the other fellow may not be doing things your way, but he is travelling along the same road, and last but not least, remember the grand old game of Amateur Radio will always only be as strong as its weakest link. 73 to you, de Pansy 5PS.

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TASMANIA

NORTH WESTERN ZONE

Here we are chaps, 1959 with a whole brand new year in front of us and I take this opportunity of wishing you all the very best of everything that you earnestly wish for yourselves; you, your YL, or XYL, and your family. Also I hope everyone will do their best in the field of Radio and that all associate members will strive their utmost to get their "ticket" THIS YEAR.

There hasn't been a lot of activity within the zone during the month so news may seem a trifle brief. The Hobbies Exhibition in Burnie during November went off OK and the local boys, assisted with some gear from the Devonport boys, established quite a varied and interesting section. Roy 7RN had his rig set up and operated under the call sign 7WI. He battled on gamely most nights against some of the worst conditions experienced for some time. A screen resistor in the exciter unit got excited one night and gave a little trouble to add to the fun. Some 288 Mc. gear was on display and I believe they had one unit mobile one night. An experimental t.v. set was running on a couple of channels, also a couple of 'scopes displaying wave patterns. Quite an array of interesting radio components was also on show and I leave it to you to imagine some of the enquiries from the public. Everybody was electronically counted both in and out of the exhibition; same counter causing no end of bother when people stood too long in front of the light beam.

As our December meeting hadn't been held when this went to print, I shall report on same next month along with this month's meeting to be held on the 6th instant. Don't forget to come along and make it as great a success as the last instructional night.

Our Secretary has had a spot of annual leave and I believe he got right on the right "frequency" and made quite a number of successful contacts with fish at Great Lake and on the East Coast. Can't agree that that is the way to get your transmitter built Max, but the relaxation should make you just right for the building project.

From "reading the mail" I understand Dennis 7DR has at last passed all his exams and he declares there'll be no more study. Congratulations to you, Dennis, you can't use the old excuse of "study" for not being heard on the air from now on. I suppose that boat will make the new one. Happy and Prosperous New Year to all.

— . . . —

PAPUA-NEW GUINEA

There's not much to tell this month. There was a vast improvement in attendance at the last monthly meeting, twelve members were present. This is a 100 per cent. improvement and we hope that the members will keep up the interest they have shown. Our President, 9FN, has resigned from the position of President and operator of 9WI. These positions have been filled by Doug 9SB. Our first Divisional letter went out this month and we are now waiting for some comments from the outside members who cannot attend the meetings. This should be a great boon and help to get more Amateurs back in the Division. Here's hoping, anyway.

We would like to welcome the following new members into the Division and trust their sojourn with us will be a pleasant one: Rob 9RD, Jerry 9GK, Bill 9WK, Doug 9DB, Roy 9AU and an associate member, Mrs. Una Clark, XYL of the QSL Officer.

It is anticipated that at the next meeting that a lecture will be given and this will be put on tape and broadcast to the members in the Sunday morning hook-up. Now that a news letter is published, it is hoped that members will take enough interest to send in a contribution, this will not only help other members but will help the Editor to keep it going, so how about it chaps?

There is quite a bit of activity in Moresby at present. They seem to have gone mad on antennae. Doug 9SB has acquired a tower and is busy putting up a tri-band quad before Christmas, but he didn't say which one. Bob 9RR is busy with a G4ZU and should have it working within a fortnight; Rob 9RO has dismantled a long wire on a bent rod and is also toying with a quad, but I think he is waiting to see how 9SB makes out. No sense in two of them wasting time is there?

The winner of the ragchewers cup this month is Norm 9NT. I heard him on 21 Mc. the other night at 7.30 p.m.;! decided to have a chat with him but I couldn't get a word in edgeways. At 11 p.m. he was still going strong; the same station, too, so I have given up the hope of ever working the said gentleman. That sea voyage must have been good for the constitution Norm; you won't want any leave now, hi. Haven't heard 9GV lately. Still too busy washing nappies, I think. Hope you can spare ten minutes on a Sunday anyway, George. How about getting round those other Lae boys, too, and give us some news from that neck of the woods. Eddie 9AT has changed to s.s.b. and should be heard in the near future.

The QSL Bureau requests that members make sure their contacts have their call correct, and if possible get them to write the name of the operator on the card as a means of identification. This will help to get cards to the rightful owner with the minimum of delay. Cards arrive with odd call signs on them, so, if the operator's name is also on the card this would let the Bureau know who the card is for.

There was no meeting for December, the next being the last Wednesday in January. To finish off I would like to wish you all a Merry Christmas and a bright and prosperous New Year. So 73 for 1958 and be seeing you all in 1959.

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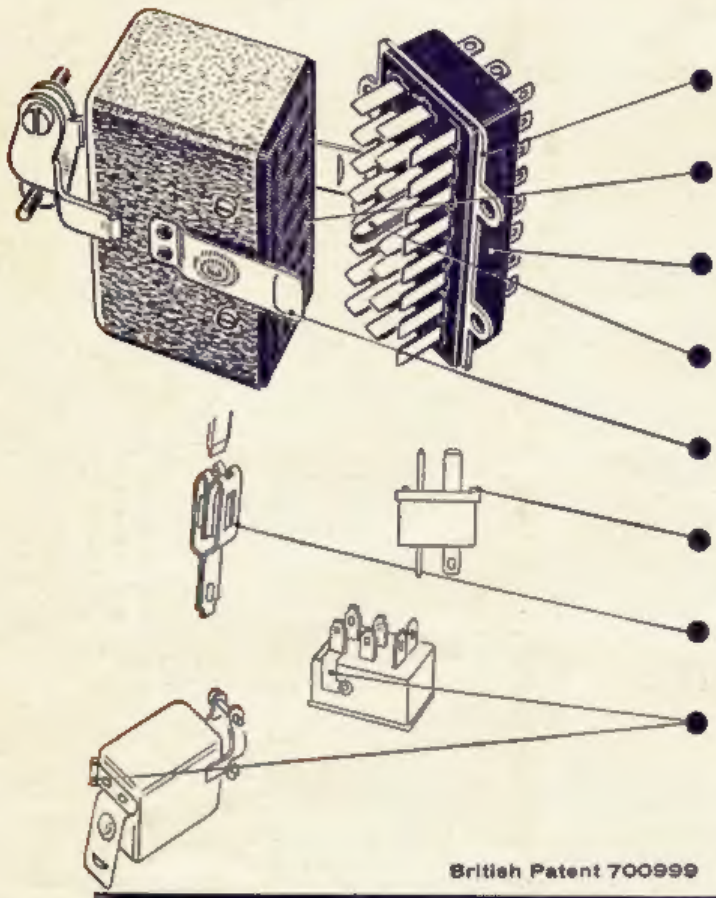

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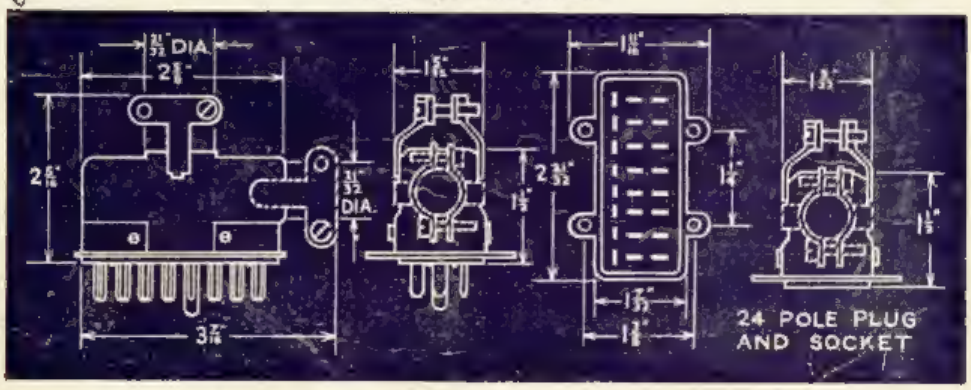

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